Set	Items	Description
S1	61651	MARKETING AND FREIGHT
S2	11150	S1 AND INTERNET
S3	3940	S2 AND (SHIP OR SHIPPING)
S4	683	S3 AND (BRAND OR BRANDING)
S5	94	S3 AND AFFILIATION
S6	20	S4 AND S5
S7	4	S3 AND ACCESSORIAL
S8	458	ACCESSORIAL
S9	350	S8 AND (FREIGHT OR CARGO)
S10	50	S9 AND INTERNET
S11	18	S10 AND (SHIP OR SHIPPING)
S12	14	RD (unique items)
S13	27	FREIGHT AND ((USER OR CUSTOMER)(N)IDENTITY)
S14	0	S13 AND AFFILIATION
S15	13	S13 AND CODE
S16	11	RD (unique items)
S17	36	(CUSTOMER OR USER) (N) AFFILIATION
S18	1	S17 AND (SHIPPING OR TRUCKING OR FREIGHT)
S19	36	S17
S20	24	RD (unique items)
S21	15	S20 AND (IDENTI? OR INDICATOR?)
S22	1572	SHIPPING (N) RATE
S23	214	S22 AND (SCHEDULE? OR SCHEDULING)
S24	90	S23 AND CARRIER?
S25	70	RD (unique items)
S26	34	S25 AND (USER OR CUSTOMER)
S27	22	S26 AND (TRACK OR TRACKING OR TRACKS)

brown—S5
ALL {S6, S7
brown —S10
ALL —S12
ALL —S16
ALL —S18
ALL —S20
ALL —S21
ALL {S26, S27

Set	Items	Description
S1	797	(GROUP(N)RATE) AND (MEMBER OR CUSTOMER OR USER)
S2	231	S1 AND (IDENTIFY OR AFFILIAT?)
S3	35	S2 AND (SERVER OR DATABASE)
S4	33	RD (unique items)
S5	13	S4 AND INTERNET

ALL { S4 S5

from 09/303,788

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?show files
File    9:Business & Industry(R)  Jul/1994-2001/Feb 12
            (c) 2001 Resp. DB Svcs.
File   15:ABI/Inform(R) 1971-2001/Feb 10
            (c) 2001 Bell & Howell
File   16:Gale Group PROMT(R) 1990-2001/Feb 12
            (c) 2001 The Gale Group
File   18:Gale Group F&S Index(R) 1988-2001/Feb 12
            (c) 2001 The Gale Group
File   20:World Reporter 1997-2001/Feb 13
            (c) 2001 The Dialog Corporation
File  148:Gale Group Trade & Industry DB 1976-2001/Feb 12
            (c)2001 The Gale Group
File  160:Gale Group PROMT(R) 1972-1989
            (c) 1999 The Gale Group
File  169:Insurance Periodicals 1984-1999/Nov 15
            (c) 1999 NILS Publishing Co.
File  267:Finance & Banking Newsletters 2001/Feb 12
            (c) 2001 The Dialog Corp.
File  268:Banking Information Source 1981-2001/Feb W1
            (c) 2001 Bell & Howell
File  473:Financial Times Abstracts 1998-2001/Feb 12
            (c) 2001 The New York Times
File  475:Wall Street Journal Abs 1973-2001/Feb 12
            (c) 2001 The New York Times
File  481:DELPHES EUR BUS 80-1999/DEC W3
            (c) 1999 ACFCI & CHAMBRE COMM IND PARIS
File  485:Accounting and Tax Database 1971-2001/Feb W1
            (c) 2001 Bell & Howell
File  583:Gale Group Globalbase(TM) 1986-2001/Feb 13
            (c) 2001 The Gale Group
File  621:Gale Group New Prod.Annou.(R) 1985-2001/Feb 12
            (c) 2001 The Gale Group
File  623:Business Week 1985-2001/Feb W2
            (c) 2001 The McGraw-Hill Companies Inc
File  624:McGraw-Hill Publications 1985-2001/Feb 08
            (c) 2001 McGraw-Hill Co. Inc
File  625:American Banker Publications 1981-2001/Feb 12
            (c) 2001 American Banker
File  626:Bond Buyer Full Text 1981-2001/Feb 12
            (c) 2001 Bond Buyer
File  635:Business Dateline(R) 1985-2001/Feb 13
            (c) 2001 Bell & Howell
File  636:Gale Group Newsletter DB(TM) 1987-2001/Feb 12
            (c) 2001 The Gale Group
File  790:Tax Notes Today 1986-2001/Feb 13
            (c) 2001 Tax Analysts
File  791:State Tax Today 1991-2001/Feb 13
            (c) 2001 Tax Analysts
File  792:Worldwide Tax Daily 1987-2001/Feb 13
            (c) 2001 Tax Analysts
File  810:Business Wire 1986-1999/Feb 28
            (c) 1999 Business Wire
File  275:Gale Group Computer DB(TM) 1983-2001/Feb 12
            (c) 2001 The Gale Group
File  813:PR Newswire 1987-1999/Apr 30
            (c) 1999 PR Newswire Association Inc
File   77:Conference Papers Index 1973-2000/Nov
            (c) 2000 Cambridge Sci Abs
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            (c) 2000 UMI
File   65:Inside Conferences 1993-2001/Feb W2
            (c) 2001 BLDSC all rts. reserv.
File    2:INSPEC 1969-2001/Feb W2
            (c) 2001 Institution of Electrical Engineers
File  233:Internet & Personal Comp. Abs. 1981-2001/Feb
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(c) 2001 Info. Today Inc.
File 474:New York Times Abs 1969-2001/Feb 12
          (c) 2001 The New York Times
File 278:Microcomputer Software Guide 2001/Jan
          (c) 2001 Reed Elsevier Inc.
File 634:San Jose Mercury Jun 1985-2001/Feb 09
          (c) 2001 San Jose Mercury News
File 347:JAPIO Oct 1976-2000/Jul(UPDATED 001114)
          (c) 2000 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2000/Feb W01
          (c) 2001 European Patent Office
File 349:PCT Fulltext 1983-2001/UB=20010208, UT=20010125
          (c) 2001 WIPO/MicroPat
?

Dialog
2/13/01

Laying down the law: Terms of use for World Wide Web sites

ABSTRACT: More and more Web site publishers are attempting to set their own
rules by imposing "terms and conditions" on people visiting their sites.
Many webmasters are putting hypertext READ THIS notices on their home
pages. These postings link to terms and conditions that purport to govern
users of the web site. Tips for the web site publisher on how to
effectively draft terms are provided.

TEXT: The World Wide Web is the wild frontier of commerce, and the law has
not caught up with all the activity on the open range. Web sites offer
users tremendous resources: database information, chat rooms, bulletin
boards, free software, and entertainment. Universal rules for the use of
these resources, however, do not yet exist. Without clear standards of
behavior, users could start the chat room equivalent of a saloon fight, or
make off like rustlers with a Web site's intellectual property.

More and more Web site publishers are attempting to set their own rules by
imposing "terms and conditions" on people visiting their sites. Like a
sheriff posting a warning at the edge of town, many Webmasters are putting
hypertext READ THIS notices on their home pages. These postings link to
terms and conditions that purport to govern users of the Web site. Even
without a six-shooter and a tin star, the following tips will provide some
ammunition for drafting terms that can keep the peace on a **Web** site:

Make the terms and conditions conspicuous. Merely giving clear notice of
what behavior is expected will bring most users into line. A link to the
terms of use, or the terms themselves, should be clearly and prominently
labeled on the home page.

Require **user** **agreement** before proceeding. Common ways to get a **user**
to **agree** to the terms of use include a button saying "I **Agree** " or a
dialog box in which the **user** **must** type in his or her name. The **user**
should also have the **explicit** option to **reject** the terms and leave the
Web site, such as a button saying, "I Do Not **Agree** ." At minimum, the
home page of the **Web** site should clearly state that proceeding to use the
site constitutes **agreement** to the terms and conditions conspicuously
shown to the **user** .

Make disclaimers regarding content. When appropriate, the terms of use
should include disclaimers regarding the content of the site. If the **Web**
site has an unmonitored bulletin board service available for users, the
terms should specifically disclaim any responsibility for or review of user
nosines on the bulletin board.

Include a license for content If the Web publisher wants to restrict
copying, redistribution, or other use of the content on the Web site, the
terms of use should include a license to that content.

Note appropriate guidelines for bulletin boards and chat. Terms of use
should forbid the user from uploading anything that is obscene, infringes
copyright, defames, or otherwise injures any person or entity. The terms
and conditions should not imply, however, that the Web publisher will
monitor the site, if that is not the case. In some situations, the user may
be required to indemnify the Web publisher against any claim arising out of
the user s breach of the site's guidelines.

Invite correction requests. The terms may extend an offer to remove-upon request-any infringing, defamatory, or other objectionable material, if the requesting user can adequately explain the nature of his or her objection.

Obtain a license from users. If the Web site publishes any user content on bulletin boards, chat rooms, or in any other form, each user should be required to grant a commensurate license to the Web publisher.

State a choice of law, jurisdiction, and venue. While the Web publisher may be located in Dodge City, a user may be located in Beijing. The terms and conditions should establish which jurisdiction's law will apply to their enforcement, and which jurisdiction's courts will have authority to judge any disputes.

Reserve the right to change and terminate. The terms and conditions should allow the Web publisher to change the terms from time to time by posting the changes on the Web site. Unless the user is paying for a defined period of access to a site, the Web publisher should reserve the right to terminate the agreement and the user's right to access the Web site under the terms and conditions, without notice.

While such terms and conditions may not actually keep all the bad guys off the Web site, they can at least allow the Web publisher to show it took reasonable steps to dissuade bad behavior. The terms may even provide the basis for a lawsuit against outlaws who have agreed to the terms prior to using the Web site. In any event, clear and conspicuous terms of use are an important step to finding "happy trails" on the Web.

Author Affiliation:

Liam IL Lavery is an attorney in the Seattle office of Preston Gates & Ellis LLP, with a practice focusing on intellectual property and online transactions.

DESCRIPTORS: Web sites; Guidelines; Rules; Users; Self regulation
CLASSIFICATION CODES: 9000 (CN=Short Article); 9190 (CN=United States);
    5250 (CN=Telecommunications systems); 9150 (CN=Guidelines)
?

Class 705 Template Review

Serial No: 09/557822   Date Returned to SPE: 2/19/02
Art Unit: 2163   Date Reviewed: 2/19/02

SPE Initials If Agree   Reviewer Comment

1. Reasons for Allowance:
   Y   Clear statement of Reasons for Allowance
   Y   Indicate how claims distinguish over the closest prior art
   Y   Claim groups of differing scope having a separate RFA
   Comments:

2. Search Areas and Tools:
   N   US Classified Search
   Y   US Patents Text Search - EAST/WEST and/or STN USPATFULL
   Y   Foreign Patent Documents – WEST/Derwent WPI and/or Epoque II
   Y   NPL Search – PTO NPL, Dialog, STN, etc.
        Internet Sites – (optional)
   Comments:
        SEE ATTACHED

3. Search Query:
   N   Text Search – Strategy to search concepts/key words
   Y   Separate strategies for each search area (US, Foreign, NPL)
   Y   Recordation of Search in file wrapper with annotation
   Comments:
        SEE ATTACHED

4. Reference Citations:
   Y   Best art in each category (US, Foreign, NPL) listed on 892 or 1449
   Y   Clear indication of why the reference was cited
   Comments:

5. Other Problems:
   N   Sensitive Application Warning system issues
   Y   Broad claims
   Comments: SEE ATTACHED

Please Complete and Return This Sheet To The QAS Box After Disposition

Must be within *2 weeks* of receiving QAS comments

Disposition Date:_____

Disposition: Reopened
(circle one)   ⇒   Sent to Pubs
                    Other Explain:_____

SN 09/557,822
Tariq, Marc,

2) Search Areas and Tools:

The US classified search should have included 705/26 since this is also a shopping issue not just a freight issue. Shopping systems with pages that force the user to respond to related offers before completing a transaction would be relevant. Note the examples mentioned below in 5) that could serve as analogous art.

3) Search Query:

The search queries do a good job of looking for the preferred embodiment, but do not go to the core concept of making a customer respond to a related offer before finishing a transaction. Note the discussion below. One possible query would look for (customer or consumer or patron or shopper or buyer or purchaser) near related items/services as in (warranty or warranties or options or accessory or accessories...) near the necessary action (accept or decline or refuse or reject or agree or turn(w)down...)

5) Other Problems:

Re. "broad claims", the reasons for allowance stress the required acceptance or denial by the customer of "accessorial services" for the advantage of reducing billing discrepancies. However, note that the system of claim 1 does not perform any of the accessorial services, it merely presents these as options to a customer that the customer must expressly accept or decline. As a result, the patentability of the claim cannot rely on the type or title of service. The system would perform the same no matter what the mere title of the service was. The only difference a particular service type would yield would be what the customer would think or expect. This is not a structural distinction.

Further, the reason why this is done, by itself, would not lend patentable weight. What matters is what is done, not why. Other motivations could exist to do similar things for other services, e.g. to increase earnings for the merchant by making a customer specifically decline or accept an extended warranty or a maintenance plan or even accessories for the product purchased prior to checking out.

Finally, even if the particular services are given weight, applicant did not invent the services described. As a result, if analogous art was found that showed other options that needed to be expressly accepted or declined before

proceeding like the examples above, obviousness could be argued re. applying that art to the known services claimed for the same benefits of profit.

See attached articles, one describes the profit motivation for putting in an offer for extended warranties before completing the sale and another that describes known accept/reject dialog boxes that must be responded to. While these documents alone may not amount to a rejection, one reference of record (see "Simplified or Not...", Traffic World, 10/96) suggests that accessorial charges are extra profits that the trucking carriers "need to stay alive and healthy". As a result, it would be obvious to explicitly offer these in each on-line shipping transaction, much like extended warranties, for profit.

Any questions, please stop by.

Bob Weinhardt
CPK2 2C12
2/19/02

.06095873   SUPPLIER NUMBER: 75479453   (THIS IS THE FULL TEXT)
Guaranteed rip-off.(questionable need for extended warranties)(Brief Article)
MENZIES, DAVID
Canadian Business, 74, 7, 66
April 16, 2001
DOCUMENT TYPE: Brief Article   ISSN: 0008-3100   LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 718   LINE COUNT: 00058

TEXT:
     Extended warranties are a big waste of money

Stroll into a big-box electronics store to purchase a TV, stereo or microwave oven, and chances are you're going to be hit with the hard sell--for the optional extended warranty, that is.

Retailers love selling the things. And little wonder: an estimated 80% of consumers who purchase such insurance never make a claim against it. That means for the most part, extended warranties are pure gravy. (An extended warranty can cost from as little as 10% to more than 30% of a product's retail price.) Some industry observers claim that because of the razor-thin margins on electronic goods, certain chains make more money hawking warranties and service contracts than they do selling actual merchandise.

But is the purchase of an extended warranty a good deal for the consumer? In a word, no. First, there are a few catches to consider. For one thing, the extended warranty kicks in immediately, as opposed to a year from the purchase (when the manufacturer's warranty expires). Thus, a three-year extended warranty means your product is covered for three--not four--years. The other consideration is the likelihood that the product will even go on the fritz. The cost of repairing an electronic gadget can often be far less than the cost of an extended warranty.

The US-based Consumers Union (CU) advises shoppers to steer clear of extended warranties. CU estimates profit margins on such service contracts range from 40% to 77% and also notes that most product defects are typically revealed in the first 90 days while the manufacturer's warranty is still in effect. Alas, the nitty-gritty financial details behind extended warranties remain a closely guarded industry secret. "(Warranty sales revenue) is not information we give out," says Gary Patterson, chief financial officer of publicly traded Future Shop (TSE: FSS). Likewise, Laurie Bauer, a spokeswoman for Minneapolisbased Best Buy Co. Inc.--which is expanding into Canada next year--also declined to release information on extended warranty sales. Patterson did say that about half of Future Shop's customers tend to purchase extended warranties--and while he wouldn't reveal how many actual claims are made, he says the industry average runs between 25% and 30%. Of course, he adds, the **consumer** can always choose to **declin** e the **extended   warranty** .

That might be easier said than done. For the purpose of this story, we visited a Toronto-area Future Shop to purchase a $200 Panasonic portable stereo. Before ringing up the purchase, the salesman went into hard-sell mode to convince us to buy a three-year extended warranty for $30 (or 15% of the cost of the product). The thrust of his pitch: should something go wrong with the unit after one year, it would cost "at least $40" to courier the defective boom-box to Panasonic. 'You can't go wrong," he insisted.

While most electronic sales representatives do engage in pressure tactics, Bauer says Best Buy does not pay commissions to employees who sell extended warranties. Well, not exactly. Bauer later admitted that "a portion of managers' bonuses is based on the sale of warranties." Two years ago, Best Buy stores in Florida attracted the attention of that state's Attorney General's office. Some Floridian Best Buy employees were so zealous in selling extended warranty protection to consumers that they actually lied about the manufacturer's warranty. (In some cases, Best Buy employees told consumers that the products they were purchasing only came with a 14-day manufacturer's warranty or no warranty at all, when in fact

most manufacturers typically offer a one-year warranty.) The result of the investigation: Best Buy paid a settlement of US$200,000 to the Florida Attorney General's office.

CU's advice: avoid extended warranties as-though they were eight-track tape players. Purchase products with a solid record of reliability in order to avoid the likelihood of breakdowns. And if you really crave extra protection, pay with a credit card that offers to double the manufacturer's warranty. As it stands now, extended warranties are a great deal--for the retailer, that is.

DESCRIPTORS: Consumer goods--Purchasing; Extended warranties--Usage
GEOGRAPHIC CODES/NAMES: 1USA United States; 1CANA Canada
PRODUCT/INDUSTRY NAMES: 6330940 (Extended Warranties)
NAICS CODES: 524298 All Other Insurance Related Activities
FILE SEGMENT: MI File 47
?

Simplified or not?; Carriers, Shippers Seek Common Ground in New Regional
LTL Pricing Environment
TRAFFIC WORLD (TW) - october 28, 1996
By: Rose Horowitz
Section: SPEC Page: 33
Word Count: 1482

MEMO:
Special Report: TRUCKING INDUSTRY UPDATE, pp. 28-36.

  Carrier Pricing

  Horowitz is a freelance writer based in Weston, Conn.

TEXT:
Regional LTL **freight** rates, always fertile ground for cutthroat
competition, have become even more innovative since intrastate trucking was
deregulated last year, forever changing the ground rules for both shippers
and carriers.

    While one motor carrier has moved to eliminate **accessorial** charges,
other trucking executives say they don't plan similar actions. But several
trucking companies are offering more streamlined rate structures designed
to benefit their customers.

    Shippers contacted generally welcomed a more simplified rate
structure, although they say the impact of Pitt Ohio Express cutting
accessorial charges varies depending on the business. Carrier executives
don't expect other lines to follow suit. "If you eliminate **accessorial**
charges, you set up a system where the nonuser subsidizes the user because
costs are being spread," said Bruce Gebhardt, vice president of **marketing**
for Viking **Freight** Inc. in San Jose, Calif., the Caliber System LTL
subsidiary. "Our position has always been there should be as little
cross-subsidy as possible.

If the cost is there, someone has to pay it. If the customer doesn't pay
it, then it comes out of our margins and eventually it comes out of
operating revenue. Then you go out of business," Gebhardt said.

    At the same time Pittsburgh-based Pitt Ohio moved to eliminate
accessorial charges, it also increased base rates by 5.9 percent and
canceled any fuel surcharges for the rest of the year.
    "It's basically just a rate increase," said Bernie DeSabatini, who
handles traffic at Westinghouse Printing Co. in the Pittsburgh area. "A lot
of those charges don't count for me," he said. But DeSabatini has no plans
to stop using the carrier. "You get what you pay for and I believe they're
top-notch in terms of service."

    But Modern Glass Co. in Aliquippa, Pa., another shipper that uses
Pitt Ohio, said eliminating the **accessorial** charges will be an advantage
for them. "If anything, this will help us out," said Shirley Williams, the
traffic manager for Modern Glass, which makes coffee mugs and glasses. Many
of its customers like them to **ship** by United Parcel Service, but Williams
said she prefers to **ship** by LTL, which results in less breakage. Plus,
shipping mugs and glasses means a lot of inside delivery charges for its
customers. "A lot of people don't want to pay charges," said Williams.

    Judy Fisher, purchasing and traffic manager for Walco Corp. in
Glenshaw, Pa., said **accessorial** charges are not a big factor in the
company's shipments of its adhesive tape sold to industrial and automotive
markets. Walco will continue to use Pitt Ohio, said Fisher. "Their service
and quality far outweigh a minimal upcharge," she said.

"They've done a good job in simplifying rates based on customer demand and taken out some of the ambiguity," said John DuBiel, corporate director of transportation for Revlon Worldwide, based in Oxford, N.C. DuBiel said that when Revlon negotiates rates with carriers, it "clearly defines what **accessorial** revenue we would pay."

"We bring that to the table and ask them to factor that into base rates and discount levels so they get a true picture of how Revlon's **freight** works," said DuBiel. That way, he said, "There's no ambiguity regarding rates, no balance-due or past-due billing." Added DuBiel, "It aids in our accrual process because we receive one bill for one shipment. It enhances a good solid relationship between the carrier and the shipper because there aren't any surprises."

Many large shippers move their cargo under contracts which often waive **accessorial** charges such as inside deliveries, single-shipment charges and hazardous material charges, said Charles L. Hammel III, president of Pitt Ohio. About 50 percent of the carrier's volume moves under contracts that are not affected by the 5.9 percent increase in its base rates, he said.

Pitt Ohio moved to eliminate its **accessorial** charges to simplify its rate structure, he said. "We want the customer to have confidence that there would be no added charges if their customer would request something that we did,"

he said. "We would like to give our customers a competitive advantage when their sales force is selling the product."

Pitt Ohio's revenue will total about $110 million this year, according to Hammel.

"Only the market can tell us whether these guys are making the right decision," said Kenneth Simonson, vice president and chief economist of the American Trucking Associations in Alexandria, Va. Simonson said Pitt Ohio may increase their volume but if that results in driving up their costs, the carrier "may not be ahead at the end of the day." On the other hand, he said, the carrier could increase its profitability and reduce its accounting costs by simplifying its pricing structure. "There's a lot of variety in pricing structures," said Simonson.

Viking **Freight** recently introduced a computerized 48-state tariff system called VK2000. The system comes on a diskette, which allows shippers to use their own PC to calculate the gross of discounted rates by using selected origin and destination ZIP code combinations. "The old system was on 12 disks and was not very efficient or fast," Gephardt said.

The new system includes four minimum charges versus 16 in the previous one, Gebhardt said. Viking **Freight** 's **accessorial** charges are now consistent throughout the country, he said. "The simplified rate application makes it easier for customers to know what their prices are going to be," he said.

Prior to the VK2000 tariff, **accessorial** charges varied from state to state.

In January, four motor carriers, Coles Express, Spartan Express, Central **Freight** Lines and Viking **Freight** System were consolidated into Viking **Freight** , which is owned by Caliber.

Viking **Freight** increased its base rates by 5.9 percent in September and eliminated its fuel surcharges. Gebhardt said Viking's hike in rates has stuck. "We have not seen a drop in volume since the increase," he said. "Our business has been relatively good."

Con-Way Transportation Services, Menlo Park, Calif., implemented a simplified nationwide tariff used by its three regional LTL carriers in January 1995, said Gary Frantz, director of corporate communications. The actions were intended to take advantage of intrastate deregulation, he said.

"Before (intrastate deregulation), depending on what state, shippers could have to look at as many 10 to 15 tariffs. Clearly, it was confusing for the customer," said Frantz. "But now with the CTF599 tariff, the customer can go to one source, a diskette-based program."

Con-Way is planning further changes for the system in 1997, he said. "We are looking at putting (the tariff system) online as a function of our Web page on the **Internet** ," he said.

Frantz said Con-Way has reduced its number of **accessorial** charges. Since 1995, he said, the company has "taken steps to simplify and consolidate our **accessorial** charges to make it easier for the shipper to understand them."

Con-Way took a base rate increase last January and its fuel surcharge is based on a weekly government index of fuel costs.

Ward Crabtree, director of traffic for Columbia, S.C.-based Southeastern **Freight** Lines Inc., said the company hopes to offer a simplified application of its **accessorial** charges and rules tariff in a diskette in the next six months. "We have not moved to eliminate any **accessorial** charges in the manner that Pitt Ohio did," said Crabtree. He added that he didn't expect other carriers would follow Pitt Ohio's example. "There are too many services that carriers provide that you don't want to necessarily include in a base rate," he said.

As a member of the Southern Motor Carriers group, Southeastern plans to issue a fuel surcharge that will fluctuate based on a government fuel index, he said.

"Shippers respond well to simplified rates," said Joseph F.H. Cutrona, executive director of the Washington-based National Small Shipments Traffic Conference. NASSTRAC included a panel on simplified approaches to rate making at its meeting last spring.

Some trucking executives expressed dismay over the impact of Pitt Ohio's move to eliminate **accessorial** charges in an industry they termed in "bad shape" and struggling with overcapacity.

"To eliminate those charges is ludicrous," said one trucking executive who spoke on condition of anonymity. "The industry overall is in horrific condition," he said. The **accessorial** charges are "extra costs the carriers need to stay alive and healthy."

"We've got to watch our costs closely and make sure we're covering all our costs and eliminate inefficiencies to provide customers with the best service we can while still providing ourselves with the opportunity to make money," said another trucking executive who asked to be unnamed.

Gebhardt of Viking **Freight** said he expects most carriers that haven't increased their rates will do so before the end of the year. "Rates are lower than needed to maintain a healthy transportation system and allow the transportation providers to keep their fleets modern and offer the kinds of services and information services that the **shipping** community needs," he said.

DESCRIPTORS: TRANSPORT; TRUCKING; INDUSTRY; RATE; COMPETITION; SHIPPER; US
COMPANY NAMES (DIALOG GENERATED): Central **Freight** Lines ; Coles Express ; Con Way Transportation Services ; Modern Glass Co ; National Small Shipments Traffic Conference ; Pitt Ohio ; Revlon

Worldwide ; Southeastern **Freight** Lines Inc ; Southern Motor
Carriers ; Spartan Express ; Viking **Freight** System ; Walco
Corp ; Westinghouse Printing Co

10/19/1   (Item 1 from file: 349)
DIALOG(R)File 349:PCT Fulltext
(c) 2001 WIPO/MicroPat. All rts. reserv.

00733731   **Image available**
A METHOD AND APPARATUS FOR HANDLING SHIPPING REQUESTS VIA THE   INTERNET
PRODECE   ET   APPAREIL DESTINE AU TRAITEMENT DE DEMANDES D'EXPEDITION VIA L'
     INTERNET

Patent Applicant/Assignee:
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     Boulevard, Los Angeles, CA 90067, US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200046718 A2 20000810 (WO 0046718)
  Application: WO 2000US2888 20000202 (PCT/WO US0002888)
  Priority Application: US 99118477 19990203; US 2000493823 20000128
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK
  DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ
  TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: G06F-017/60
Publication Language: English
Filing Language: English
Fulltext Word Count: 8552

English Abstract
  The invention is directed to a method of handling shipping orders over
  the Internet . In one or more embodiments of the invention, a shipper
  provides the necessary shipment information to numerous forwarders by
  providing the information only once to a service provider. The provided
  information is then maintained in the service provider's information
  storage system. The information is provided to a plurality of forwarders.
  The forwarders are invited to place their bids by a certain deadline. The
  system queries forwarders to place their bids and enter all relevant
  information that may be useful to the shipper in making a selection. The
  placed bids and information are then collected, stored, and arranged by
  the system for submission to the shipper. Certain information, such as
  survey results, news articles, or other publications including detailed
  information about the background of various forwarders that have
  participated in the bidding process, can also be made available to a
  shipper, if requested. Once the collected information is submitted to a
  shipper, he or she has the opportunity to select from the multiple bids
  provided by the system. Once the shipper accepts a bid, the transaction
  is completed and a confirmation is forwarded to the forwarder who has won
 the bid.

French Abstract
  La presente invention concerne un procede destine au traitement d'ordres
  d'expedition sur l'Internet . Dans une ou plusieurs realisations de
  l'invention, un expediteur fournit l'information d'expedition necessaire
  a plusieurs groupeurs en une seule fois grace a un fournisseur de
  services. L'information fournie est alors conservee dans le systeme de
  stockage d'informations du fournisseur de services. Puis l'information
  est communiquee a une pluralite de groupeurs. Les groupeurs sont invites
  a soumettre leur offre avant une certaine date limite. Le systeme demande
  aux groupeurs de soumettre leur offre et rentre toutes les informations
  pertinentes qui peuvent etre necessaires a l'expediteur, en faisant une

selection. Les offres soumises sont alors rassemblees, stockees et
arrangees par le systeme en vue d'etre presentees a l'expediteur.
Certaines informations telles que des resultats d'enquete, de nouveaux
articles, ou d'autres publications comprenant une information detaillee a
propos des antecedents des divers groupeurs qui ont participe a l'appel
d'offres peuvent aussi etre rendues disponibles a l'expediteur, s'il le
souhaite. Une fois l'information rassemblee soumise a un expediteur, il
ou elle possede l'opportunite de choisir parmi les multiples offres
fournies par le systeme. Lorsque l'expediteur accepte une offre, la
transaction est achevee et une confirmation est envoyee au groupeur qui a
remporte l'offre.

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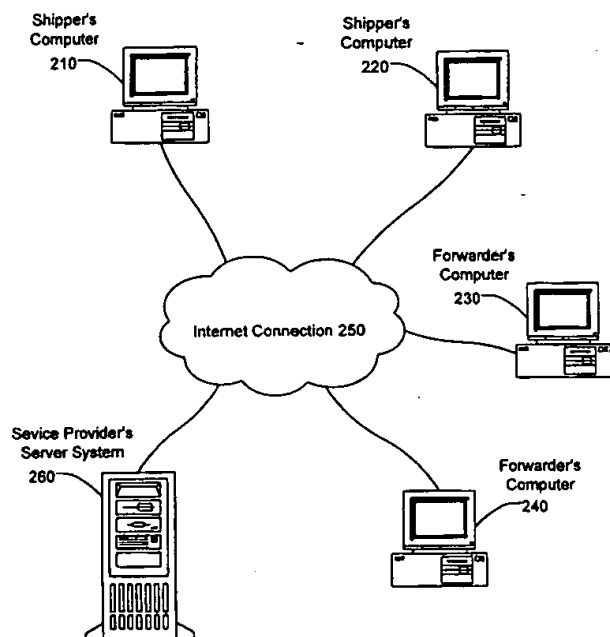
Detailed Description
A METHOD AND APPARATUS FOR
HANDLING SHIPPING REQUESTS VIA THE **INTERNET**

BACKGROUND OF THE INVENTION

I FIELD OF THE INVENTION

This invention relates to the field of interactive computer software and,
more specifically, to a business model for handling shipping orders
placed via the **Internet** .

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2. BACKGROLTND ART

Shipping of goods traditionally requires contacting a delivery service to pick up and deliver the goods. Due to the time constraints associated with the timelines for the pickup and delivery of goods, however, the process for arranging the shipping and handling of goods can be a tedious and time-consuming task. For example, time and energy will have to be spent to find and select the most reliable and competitive shipping companies in the locality. Thereafter, multiple telephone calls and conversations will be necessary to inquire about the availability of a specific shipping service (e.g., next-day, two-day, air, ground, express, or other type of delivery).

Further, the **shipping   rates** , timelines, and other related factors such as minimum and maximum weight requirements and delivery distance will have to be considered. Once all the necessary information is gathered, then a shipping company will have to be selected and the parties will have to agree on the time and location of pickup and delivery and negotiate over the cost of service.

With the ever-increasing influence Of computers and the **Internet** in our daily lives, some of the mechanics involved in the shipping and delivery of goods have been automated. Many shipping companies, such as Federal Express and United Postal Service, provide their clients with an automated way of routing or tracking the shipment of goods. Among other information, these courier services also provide rate and service information as well as means for scheduling dates and times for pickup and delivery on their web sites. Unfortunately, though, there are no services available that can provide a consumer with a plurality of delivery options and a method to select the least expensive or the most valuable service from among many service providers.

A model is needed that allows a consumer to choose the price and delivery options from among a group of providers. The currently available models are not fully capable of providing the consumer with multiple choices; neither are they capable of analyzing the needs of the consumer and providing the consumer with the most suitable option. This invention and its advantages and improvements over the prior art schemes will be better understood and appreciated by reviewing the following discussion of computer networks, the **Internet** , and traditional shipping models.
Computer Networks and the **Internet**
The **Internet** is a global computer network that provides the infrastructure for the World Wide Web or the WWW. The World Wide Web is a communication system that is composed of millions of files that contain links to other files stored on various connected computers networks.

A computer network includes a group of computers or other devices linked together in a manner that promotes communication between them. A computer network may include resources such as printers, modems, and file servers. It may also include services such as electronic mail or file transfer. A computer network can be a small system that is physically connected by cables (a local area network, or "LAN") or several separate networks that are connected together to form a larger network (a wide area network, or "WAN"), such as the **Internet** . Other types of networks include tel-com networks, intranets, extranets, wireless networks, or other networks over which electronic, digital, or analog data may be communicated.

FIG. I illustrates a computer network, wherein a client computer I 10 communicates with a server system 130 via an **Internet** connection 150. A server system (also known as a host computer) provides information to requesting computers (also known as clients) on a network.
When there are large numbers of clients, such as it is the case with the **Internet** , it becomes necessary to have more than one server computer system to handle the requests. An **Internet** client accesses a host computer on the worldwide network via an **Internet** service provider. An **Internet** service provider is an organization that provides a client with access to the **Internet** via analog telephone lines, Integrated Services Digital Network (ISDN) lines, or other communication means. Various

protocols, services, and tools have been implemented to allow a client to retrieve information from or communicate with another computer on the **Internet** .

Hypertext Transport Protocol (HTTP) is the standard protocol for communicating with an information server on the **Internet** . A protocol refers to a formal set of rules that must be followed in order for network computers to communicate. The HTTP protocol provides for communication methods that allow clients to request data from a server and send information to the server (e.g., downloading files or sending electronic mail).

One of the most valuable and commonly used tools for communication over the **Internet** is a software application known as the browser. Examples of the most popular browsers currently available include Netscape Navigator, Microsoft **Internet** Explorer, Mosaic and Cello.

As illustrated in FIG. 1, a browser 120 is a software application that runs on a client computer I 10 and provides a user-friendly environment in which a user can interact with computer I 10 via a graphical user interface (GUI). A GUI allows the user to submit various requests or responses without having to learn or type complicated or unmemorable text commands. A browser requests, transfers, and displays information that is stored as files on the **Internet** .

Requests submitted by a client computer are processed by computer systems known as hosts or servers. A server that responds to a request over the **Internet** is generally known as an HTTP server. In a typical client-server communication, client computer 110 transmits a request to HTTP server 130 (e.g., GET an object from the server or POST data to an object on the server). The HTTP server 13 0 responds to the client computer 11 O's request by forwarding a request status and the requested information.

A client request is, typically, a request f6r access to a resource on the host computer. One of the most commonly accessed resources are web sites, or web pages. Web pages are interactive resources that provide a user with a graphical interface for either viewing or downloading information. An addressing scheme is employed to identify **Internet** web sites and other available resources. This addressing scheme is called Uniform Resource Locator (URL).

A URL is a string of characters that includes information about the location of a resource on the **Internet** , the type of service requested, and the method (i.e., protocol) of communicating with that resource. In the case of a web site, the URL includes the address of the server on the **Internet** (i.e., the IP address), the port on which the server application is connected (i.e., the port number), and the location of the web site in the file structure of the server (i.e., the domain name and HTML file name).

A web site may include a number of graphically displayable pages of information (e.g., web pages) that are linked together. A concept known as hypertext or hyperlinks is used for maneuvering and linking the multiple pages of a web site. A hypertext or a hyperlink provides the ability to move directly from one web page to another web page or to other information within the same page. To activate the link, it is only necessary to click on the hyperlink (e.g., a word or an icon on the web page). A URL associated with the link identifies the location of the additional information and the browser submits the URL information in a request to the server to access the data at the site specified in the URL.

When a server receives a URL request, it first locates the web page referenced in the URL and then forwards the content of the web page to the requesting client. Referring to FIG. 1, the contents of a web site

can be created by using a computer language called the Hypertext Markup Language (HTML). This content are saved as HTML files 140 on the server. Other languages such as Extensible Markup Language (XML) and the like can be also used for creating web pages. An HTML document is a text file coded with predefined keywords (i.e., tags) and regions defined within those tags that allow a browser to identify and display different text or graphical information at a certain location on a web page. An example of the partial content of an HTML file is provided below.

```
< HTML>
< HEAD>
< TITLE> freightmart. com< /TITLE>
< SCRIPT LANGUAGE="JavaScript">
< META NAME="keywords" CONTENT=" shipping freight " function dosomthing(
```

< /HEAD> < BODY> text and graphic information < /BODY> < /HTML> The words enclosed in between the "< " and '5" constitute a tag that identifies a region of the HTML file. In the "HEAD" region, the title of the web page, java applets (for performing various functions), and other information about the web page may be defined. In the "BODY" region, all the text and other displayable information and the manner and location of their display on the web page are defined. A browser application that is executing on a client computer upon receiving an HTML file parses its content and graphically displays the page on the client's computer screen, based on the information in the HTML document. Once the client has viewed the web page, the client can submit another request to view another web page on the Internet , or may interact with the web page by entering information in a dialog box or clicking on a button, for example.

Traditional Shipping Models
Traditionally, computer networks have not been utilized to handle shipping orders over the Internet . Current shipping models for transferring freight from one point to another are demanding, time-consuming, and expensive, both for the shipping company and the shipper (i.e., the person who uses the services of a shipping company). Typically, a shipper who intends to ship a package from point A to point B wants to secure a competitive shipping rate . Thus, the shipper needs to contact several shipping companies and analyze their services based on their reputation, shipping rates , geographical coverage, and other related factors. Once the shipper has educated himself about all the particulars of the shipping service, then he can select the most feasible shipping service that fits his needs.

Similarly, shipping companies also need to spend valuable time and money on various methods of advertising and marketing to attract customers. In addition to their marketing overhead, each company needs to maintain a staff for taking customer orders and responding to customer telephone calls. Quality of customer service and the financial well-being of the company are highly dependent on the successful and effective training of well-mannered customer service representatives. The cost of training competent customer service representatives can be very expensive.

Aside from the overhead costs, a shipping company's profit margin is highly dependent on the amount of shipping surplus. Shipping surplus is an effect that is created by shipping goods in less-than-fall capacity cargo space. For example, the cost of shipping cargo in a cargo bin is the same whether the cargo bin is full or partially full. A shipping company has a higher profit margin if it can minimize its shipping surplus.
Unfortunately, the current shipping models do not provide the means for either the shipper or the shipping company to interact in such a way to minimize the above-mentioned losses in time and money. Traditionally, it has been easier for a shipper to establish a business relationship with a few shipping companies that provide him with reasonable shipping rates

However, this business model promotes dependency on a few shipping companies and does not provide the shipper with the most competitive bids that may be available in the market.

A shipping model is needed that can effectively deal with the above shortcomings so that the shipper would not have to waste time, money, and energy in researching and selecting a shipping company that most adequately satisfies his needs. It would be beneficial to both the shipper and the shipping company if means are available to efficiently handle shipping orders in a way to reduce the cost and overhead associated with the shipping process.

SUMMARY OF THE INVENTION

The invention is directed, in one or more embodiments, to a method of accepting, handling, and placing shipping orders and a shipping system that is available to a multitude of forwarders (i.e., shipping companies) and shippers (i.e., consumers with shipping needs) around the world. The objective of this invention is to provide a bidding environment for the forwarders so that a shipping company can view the specific details of a shipping order and place a bid for the specific order at the time. In one or more embodiments of the invention, the bids are to be placed by a certain deadline, as provided by the shipper.

In one or more embodiments of the invention, a shipper provides the necessary shipment information (e.g., origination location, destination, size of shipment, etc.) to numerous forwarders by providing the information only once to a service provider. A specific query site, such as a web site or a toll-free telephone line, is made available to the shipper by the service provider, where all the particulars and relevant information for a shipping order are collected.

For example, a shipper can access a web page on the World Wide Web, wherein the shipper is queried for the needed information via specially designed dialogue and text boxes. The provided information is then maintained in the service provider's information storage system such as a relational data base, where the information can be reorganized and speedily retrieved and manipulated, based on various criteria such as the time the information was received, the urgency of shipment, and the identity of the shipper.

Once the information is appropriately organized and sorted, the shipping order including other relevant information are provided to available forwarders. Forwarders are shipping companies that have subscribed to the service to receive information about the shipping orders.

In one or more embodiments of the invention, the forwarders are categorically selected. For example, a shipping order may be provided only to a certain number of forwarders as elected by the shipper. Alternatively, forwarders may be selected based on other criteria, such as their geographical area, their business reputation, or their **marketing** arrangement with the service provider. For example, in one or more embodiments of the invention, forwarders can pay a premium subscription fee to the service provider so that they are notified earlier than the other forwarders, who pay lower or no subscription fees.

In some embodiments of the invention, forwarders after receiving a proposed shipping order are invited to place their bids by a certain deadline. The system queries forwarders to place their bids and enter all relevant information that may be useful to the shipper in making a selection. The placed bids and information are then collected, stored, and arranged by the system for submission to the shipper. Certain infbrmaton, such as survey results, news articles, or other publications including detailed information about the background of various forwarders that have participated in the bidding process, can also be made available to a shipper, if requested. Once the collected information is submitted

to a shipper, he or she has the opportunity to select from the multiple bids provided by the system. Before making a selection, a shipper can reference additional information available on the system to evaluate and identify a forwarder that best suits his or her shipping needs.

Embodiments of the invention help the shipper to save time and money by providing the shipper with multiple bids in a short window of time. The system also provides the shipper with helpful information about forwarders. Using the system, a shipper can be assured of getting a competitive **shipping** **rate** and has the opportunity to study the background of various forwarders before making a choice. Once the shipper accepts a bid, the transaction is completed and a confirmation is forwarded to the forwarder who has won the bid. Embodiments of the invention also assist forwarders to be more efficient in running their business. Using the system, a forwarder can reduce its overhead costs associated with hiring and training customer service and operations staff. The system can be also used to potentially reduce the cost of **marketing** and advertising by allowing the forwarder to target groups of shippers who are categorically more suitable to use the services of the specific forwarder. The system can also be utilized to reduce shipping surplus and maximize revenue per shipment.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. I illustrates a computer network environment including a web server and a web client.

FIG. 2 illustrates a computer network environment, according to one or more embodiments of the invention, where shippers and forwarders communicate with the service provider's server system via the **Internet** .

FIG. 3 A is a block diagram of one embodiment of a computer system capable of providing a suitable execution environment for one or more embodiments of the invention.

FIG. 313 is a block diagram of one embodiment of system software that directs the operation of the computer system illustrated in FIG. 3A.
FIG. 4 is a flow diagram of a method of handling shipping orders placed over the **Internet** using the system of this invention, according to one or more embodiments.

FIG. 5 is a flow diagram of a method of collecting shipping information, according to one or more embodiments of the invention.

FIG. 6 is a flow diagram of a method of processing shipping orders, according to one or more embodiments of the invention.

I I
DETAILED DESCRIPTION OF THE INVENTION

The invention is directed to a method and apparatus for handling shipping orders on the **Internet** and a system that provides a shipper with the best possible bid from among a number of bids submitted by forwarders. In a certain preferred embodiment of the invention, the shipping system and their services provided by the system are managed, maintained, and operated by a service provider.

The service provider is an entity to which both the shippers and the forwarders subscribe.
A shipper is a person or an entity who places a shipping order. A forwarder is a person or an entity such as a shipping company or courier service that submits a bid for providing the shipping service.

In the following description, numerous specific details are set forth to provide a more thorough description of embodiments of the invention. It is apparent, however, to one skilled in the art that the invention may be

practiced without these specific details. In some instances, well-known features have not been described in detail so as not to obscure the invention.

System Architecture

In one or more- embodiments of the invention, a computer system architecture is utilized to accept and process shipping orders and bids submitted by multiple shippers and forwarders, and to handle the communication of all information among the shippers, forwarders, and other parties involved in the process. Typically, a computer system architecture is composed of two distinct environments, a software environment and a hardware environment. The hardware environment, as it is discussed in further detail below, includes the machinery and equipment (e.g., CPU, disks, tapes, modem, cables, etc.) that provide an execution environment for the software. On the other hand, the software environment provides the execution instructions for the hardware environment.

In operation, a computer needs both the hardware and the software environments to function. One is useless without the·other.·.The software environment can be divided into two major categories, including system software and application software. As it is further discussed below, system software is made up of control programs; such as the operating system (OS) and information management systems, that instruct the hardware how to function and process information. Application software is a program that more directly interact with a user and processes specific information for a user (e.g., word-processing applications). In short, the hardware environment specifies the commands it can follow and the software environment instructs it what to do.

FIG. 2 illustrates the system architecture according to one or more embodiments of the current invention, where shippers and forwarders communicate with a service provider via the **Internet** using client computers. The service provider is the entity that provides the shippers and forwarders with the on-line services that are the subject matter of the current invention. In one or more embodiments of the invention, the system software and the application software that implement the on-line shipping services are at least partially installed on one or more server systems, such as service provider's server system 260.

The services are available via **Internet** connection 250 to shippers or forwarders who have established an account with the service provider. **Internet** connection 250 connects client computers utilized by the shippers and forwarders (e.g., computers 2 10 through 240) to service provider's server system 260. Computers 210, 220, 230 and 240 are utilized by the shippers or the forwarders to post or receive shipping orders and bidding information from server system 260. The client and server computer systems, in one or more embodiments of the invention, include hardware and software components and system architectures that are suitable for the operation of the application software of this invention.

The various hardware and software components of the above client and server architectures are illustrated in FIGS. 3A and 3B. This invention, including the application software for handling shipping orders on the **Internet** , in one or more embodiments, can be implemented in association with hardware system 3 10 (FIG. 3 A) and software system 320 (FIG.

313) as described in further detail below. The following hardware and software systems, however, are provided for the purpose of example only. The invention may be practiced either individually or in combination with other suitable hardware or software architectures or environments.

System Hardware Environment

An embodiment of the invention that. includes the system and application software can be implemented as computer software in the form of computer

readable code executed on a general purpose system such as system 310, illustrated in FIG. 3A. System 310 comprises a central processor unit 3 0 1, a main memory 3 02, an input/output controller 3 03, cache memory 3 04, user interface devices 305 (e.g., keyboard, mouse, microphone, camera, etc.), storage media 306 (e.g., hard drive, flash memory, floppy, optical, or magneto-optical disks, etc.), a display screen 307, and a communication interface 308 (e.g., a network card, a modem, or an integrated services digital network (ISDN) card, etc.), and a system clock (not shown in FIG. 3A).

Processor 301 may or may not include cache memory 304 that is utilized for storing frequently accessed information. One or more input/output devices such as a printing or a scanning device may be included in system 3 10. A communication means, such as a bi directional system bus 300, is utilized to provide a mechanism for communication between the system components. The system itself is capable of communicating with other systems through communication interface 308.

For example, system 3 10 can send messages and receive data, including program code through the communication interface 308. Wireless links are also possible. In any such implementation, communication interface 308 can send and receive electrical, electromagnetic or optical signals which carry digital data streams representing various types of information. If communication is established via the **Internet** , a remote server system might transmit the requested code for an application program through an **Internet** connection to the communication interface 308. The received code is executed by central processor unit 301 as it is received or is stored in storage media 306 or other non-volatile storage for later execution.

System 3 10 may obtain program code in any form, for example in the form of code transmitted via any type of carrier wave. Program code may be embodied in any form of computer program product. A computer program product comprises a medium configured to store or transport computer readable code, or a medium in which computer readable code may be embedded. Some examples of computer program products are CD-ROM disks, ROM cards, floppy disks, magnetic tapes, computer hard drives, servers on a network, and carrier waves.

In one or more embodiments of the invention, processor 301 is a microprocessor manufactured by Motorola or a microprocessor manufactured by Intel, such as a Pentium processor, or a SPARC microprocessor from Sun Microsystems, Inc. The named processors are for the purpose of example only. Any other suitable microprocessor or microcomputer may be utilized. The system hardware environment may be embodied in the form of a computer system, a set-top box, or other similar hardware environments that have information processing and data storage capabilities.

System Software Environment
FIG. 3B illustrates a computer software system 320 suited for managing and directing the operation of system 3 10, for example. System software 320 is, typically, stored in storage media 306 and is loaded into memory 302 prior to execution. It includes an operating system (OS) 321 that controls the low level operations of system 3 10. Low level operations include the management of the system's resources such as memory allocation, file swapping, and other core computing tasks. In one or more embodiments of the invention, operating system 321 is Microsoft Windows 98, or Microsoft Windows NT, or Macintosh OS, or IBM OS/2. However, any other suitable operating system may be utilized.
One or more computer programs, such as client software application 322, are executed on top of the operating system 321 after they are loaded from storage media 306 into memory 302.

Client software application 322 may include a web browser software 323 for communicating with the **Internet** . Software system 320 includes a user interface 324 (e. g., a Graphical User Interface (GUI)) for

receiving user commands and data. The commands and data received are processed by the software applications that are running on the computer system 3 10.

The system architectures and environments described above are for purposes of example only. Embodiments of the invention may be implemented in any type of system architecture or processing environment. For example, in some embodiments of the invention the system software may be hardwired into the hardware environment or implemented within non-volatile memory devices.

Application Software for a- Shipping Business Model One or more embodiments of the invention are directed to a method and apparatus for collecting and processing shipping information via the **Internet** . Referring to FIG. 2, shippers may place shipping orders using computer equipment, such as computers 2 10 and 220.

Forwarders, in turn, can view the shipping orders placed by the shippers using computer equipment, such as computers 230 and 240. Computers 210, 220, 230, and 240 may be located at any location, whether at home or business premises.

As illustrated in FIG. 2, one or more of the computers used for the purposes of placing or viewing a shipping order are connected via **Internet** connection 250 in a worldwide network. A server system, such as service provider's server system 260, is utilized to provide the hardware and software execution environment for the application software of the current invention. The application software is executed partly or fully on server system 260 or client computers 2 10 through 240, for example.

Server system 260 is the unit that controls, manages, and directs data communication between the shippers and the forwarders. Server system 260 may include one or more server computers and other resources that are necessary to provide con imunication and data management services for the entire shipping system. A shipper who desires to ship a package or cargo using the system of this invention will use a computer connected to the **Internet** to locate the registration web site for the service provider. Once at the site, the shipper registers as a member by providing certain identifying information. In exchange he receives a login ID and password, for example. In some embodiments of the invention, the registration process can be completed via other means, for example, by calling into a registration center.

Once the shipper has completed registration, the shipper can place a shipping order by logging on to the service provider's shipping site and entering the necessary information, such as size and weight of the shipment or the pickup and delivery dates and times. FIG. 4 is a flow diagram of a method of handling shipping orders placed over the **Internet** using the system of this invention, according to one or more embodiments. At step 410, a shipping order is received from the shipper. At step 420, the shipping order is processed by the system. The information submitted by the shipper is stored, analyzed, and manipulated to determine or solicit the most competitive shipping bids available for a particular shipping order. The results are provided to the shipper, at step 430, in the form of one or more possible bids. At step 440, the shipper selects a bid from among the available options. At step 450, the forwarder who has won the bid is notified. The detailed account of the steps involved in placing an order and the method of processing the order are described in FIGS. 5 and 6 and are discussed in further detail below.

Collecting Shipping Orders
In a particularly preferred embodiment of the invention, shipping orders are collected in a series of steps. Referring to FIGS. I and 2, in order for the shipper to input the necessary information, the shipper first establishes an **Internet** connection 250 with the service provider's

server system 260 using a client computer (e.g., shipper's computer 210).
Connection 250 is established via a socket, which is a mechanism for
establishing a virtual connection between software applications running
on a server computer and the client computer in a network.

Once the connection is established the shipper can view the service
provider's **Internet** site using browser 120. Browser 120 is a s,oftware
application that runs on client computer 2 10.

To display a web site, the browser issues an HTTP GET request referencing
a URL for the web site the consumer desires to view (e.g.,
www.freightmart.com). Server system (HTTP server) 260 receives the
request transmitted over the **Internet** connection 250 and searches its
file system for the HTML files referenced in the submitted URL. If HTML
files are located, server 260 responds to the client 2 1 O's request by
forwarding one or more of the HTML files. Upon receipt the browser parses
HTML files and displays the host's web page on the client computer 2 1
O's screen.

In a preferred embodiment of the invention, the system requests a shipper
to enter a verifiable user ID and a password before allowing access to
the content of the web page. FIG. 5 is a flow diagram of a method of
collecting shipping information, wherein a shipper can log on to the
service provider's web site at step 5 10 by entering his or her user ID
and password. The service provider's web site contains a graphic user
interface or other interface means, such as voice-activated interface,
for example, that allows the shipper to provide the necessary shipping
information. The web site may solicit from the shipper various kinds of
shipping information, such as inquiries related to the size and weight of
the shipment, or pickup and delivery hours or methods.

In an embodiment of the invention, the shipper provides the requested
information to the system in steps 520 through 550, either by typing them
within specifically provided text boxes, for example, or other suitable
interface methods. At step 520, the shipper provides shipping information
regarding the size, weight, or other configurations of the shipment.
Other shipping configuration can relate to or define the class, kind,
content, or the number of pieces included in a shipment. For example, the
shipper can provide the number of palettes being shipped, the class
defining the density of goods (e.g., foam is class 250), the content
characteristics (e.g., electrical, frozen foods, fragile, etc.), or the
kind of goods defining whether the goods are dangerous, flammable, or
general commodity.

At step 530, the shipper provides the pickup date and time for the
shipment. The shipper may also provide alternate dates and times to
broaden the pickup possibilities as permissible.

For example, the shipper may provide either an exact date and time (e.g.,
January 1, 2000 at 2:00 p.m.), more than one exact date and time, or a
pickup time period (e.g., January 1, 2000, between 2:00 and 3:00 p.m.).
The information can be either entered in text format or by selecting
various graphical user interface methods, such as drop-down menus, radio
buttons, or other interface mechanisms that allow a user to select from a
range of items. In one or more embodiments of the invention, the shipper
can set a deadline before which the forwarder can submit bids for
consideration. For example. a shipper that wants to have a shipment
forward on January 1, 2000 may want to have a bid closing date of
December 30, 1999 at 12:00 p.m.
At step 540, the shipper provides a preferred method of delivery,
including one or more alternatives. For example, a shipper may elect for
the cargo to be transported by ocean container, truck loads, or train.
Additionally, a shipper can also select the type of service, such as
overnight delivery, two-day delivery, or other methods of delivery (e.
g., air, ocean, ground, etc.). Once the shipper has entered all the
necessary information, he may be prompted to review the information and

confirm it by clicking on a submit button, for example. At step 560, the shipper requests that the result of the inquiry to be selected automatically by the system or based on a specific selection criteria as provided by the shipper. For example, the shipper may elect for the system to automatically provide the shipper with the name and information of the forwarder that can least expensively handle the shipment. Alternatively, the shipper may elect to receive information about two or more forwarders that have submitted the most competitive bids.

In a certain preferred embodiment of the invention, the shipper can select one or more specific forwarders and invite them to bid on a specific order. Alternatively, the shipper can specifically request the system to select only certain forwarders' bids, rather than automatically selecting the most competitive bids. This feature of the invention allows a shipper to promote his or her business with those forwarders with whom he or she has previously established a relationship. This feature is also useful when the shipper wants to select only those forwarders who are more attractive to the shipper than the others, for example, because of the forwarder's good business reputation or specialty services. Thus, a shipper can select a single forwarder or a group of forwarders to be notified of a specific bid in exclusion of other forwarders.

Alternatively, the bid can be submitted to all forwarders, but a group of forwarders can be selected to be solicited for their bids by additional means such as direct e-mail messaging.

In an embodiment of the invention, for example, a shipper can place a shipping order with a specific request for a certain closing deadline (e.g., January 1, 2000 at 1:00 p.m.). The shipper may then elect to invite one or more specific shippers to submit a bid for that specific order by notifying them via an e-mail message or other methods of the bid's identification number. In some embodiments, the shipper can provide specific forwarders with an extended bidding deadline, so that they can enter a more competitive bid than the ones already submitted.

In embodiments of the invention, the bidding can be either closed or open. In an open bidding system, all bidders are able to see the bids submitted by others. In a closed bidding system, the bidders cannot view the bids submitted by others and are therefore required to submit blind bids.

Thus, in a preferred embodiment of the invention where an open bidding system is used, an invited forwarder can view the bids of other forwarders after the general bidding period is over and submit a more competitive bid during the extended bidding deadline.

Once all the necessary information for the shipping order is provided by the shipper, in a specific embodiment of the invention, at step 570 the shipper is prompted to select a method of payment (e.g., credit card, check, COD, etc.). The shipper then selects a payment method. At step 580, the shipper reviews and confirms the shipping order and submits the order by clicking on a submit button, for example. The collected information is stored temporarily in shipper's computer 2 10 and later transmitted to service provider's server system for processing and analysis via **Internet** connection 250.

The shipping information is collected by means of various input interfaces that appear on the system's web page. Navigation from one page to the next page of the web site is made possible by clicking on the hyperlinks on each web page, for example. A hyperlink is associated with a URL that references the location of the HTML file that includes information about the next page of the web site. Once that HTML file is obtained and parsed by the browser, the next web page is displayed. Each web page contains various interactive graphical user interface mechanisms, such as text boxes, checkboxes, and radio buttons, that are used in various ways to gather input information and to provide

interactivity between a user and the system. The interactive graphical user interfaces described here are by way of example only. Other suitable interface designs or methods may be utilized for collection of information from a shipper or forwarder.

Processing Shipping Orders
In one or more embodiments of the invention, information submitted by a shipper is collected by computer 210 and transmitted via **Internet** connection 250 to service provider's server system 260 for processing. The collected information is disseminated in the form of encapsulated packets of data over the **Internet** . Data is packetized according to a set of standards (i.e., protocols) and is sent to server system 260 based on special addressing schemes, as described earlier. Once data packets are received at server system 260, the data is reassembled (i.e., depacketized) and stored in a storage medium.
Referring to FIG. 6, the collected information is analyzed at step 610 for various purposes. For example, the data is verified to ensure authenticity of information (e.g., credit card numbers, User ID, password, etc.). The submitted order information may also be analyzed for accuracy. For example, the system will verify submitted information to ensure that all proper and necessary fields (e.g., pickup time and date, bid closing date, delivery pickup and destination addresses, etc.) are accurately and completely provided. The data may also be analyzed for other purposes, such as for collecting and maintaining a consumer profile data base.

In one or more embodiments of the invention, at step 620 the system selects one or more forwarders that can manage the submitted shipping order by taking one or both of the following steps. At step 630, the collected shipping information is sent to all or a selected group of forwarders, based on the information provided by the shipper. The information is, in one or more embodiments, either partially or fully accessible by all forwarders who have access to the on-line shipping system of the invention. To access the system, a forwarder needs to register as a member by providing certain identifying information and receiving a login ID and password, for example. In some embodiments of the invention, a forwarder may be given an option to subscribe to a type of service by paying a subscription fee.

Once the forwarder has completed the registration process, the forwarder can view the shipping orders submitted by various shippers, for example, by referencing an order ID.

Depending on the options selected by the shipper and other factors (e.g., the subscription policy of the service), all or only a few of the submitted orders may be available for viewing by a certain forwarder. For example, in a specific embodiment of the invention, a forwarder that pays a premium membership fee may be able to view certain bids earlier than other forwarders, or in some embodiments a forwarder may be limited to view shipping orders in a certain geographic area only, based on the type of his or her subscription agreement or location of the forwarder's or the shipper's business. Other related factors may also be considered to implement various viewing capabilities for a forwarder.

After viewing a shipping order, a forwarder has the option to submit a bid using a computer terminal such as forwarder's computer 230. The bid and all other relevant information submitted with the bid (e.g., forwarders requirements for pickup and delivery, or other shipping particulars) are received at step 640 by service provider's server system 260 via **Internet** connection 250. In addition to the above methods, bidding information can also be collected by accessing bid information stored in a database, at step 635. In embodiments of the invention, instead of soliciting a forwarder to submit a bid for each shipping order, the system can be configured to automatically examine previously submitted bids or **shipping rates** for a shipment category that matches that of the submitted order.

In one or more embodiments of the invention, for example, forwarders provide a price schedule for various shipping options in advance. This information is stored in a database and is accessible by the service provider's server system 260. Thus, when a shipping order is submitted by a shipper, the system can automatically retrieve the stored bid information from the data base, at step 645. Once the bidding information for a specific shipping order is received from the forwarders or is retrieved from the database, then the system provides the shipper who placed that order with one or more bids, depending on system configurations.

In a certain preferred embodiment of the invention, at step 650 the system analyzes the submitted bids and determines one or more of the lowest bids. Depending on system configurations and the terms of the shipper's or the forwarder's subscription agreement, bid information is formatted for delivery to the shipper, at step 660. In certain embodiments of the invention, only the lowest bid is provided to a shipper. In other embodiments, the system may be configured to provide a shipper with the top five most competitive bids, for example. Yet in other embodiments of the invention, the system may be configured to provide bids from a specific group of forwarders in exclusion of all others. For example, a shipper may have elected to accept bids only from a specific group of forwarders, as earlier discussed.

In other embodiments of the invention, bid information or the order in which bids are displayed to a shipper may be influenced by the terms of a forwarder's subscription agreement.

For example, the bid information of a forwarder who pays a premium for his subscription may be displayed at a special place on the display (e.g., the very first line in the list of displayed bids).

In some embodiments, only the bid prices are displayed and the identity of the forwarder is not revealed unless the shipper accepts the forwarder's bid. In other embodiments, the identity of the forwarder may be displayed so that the shipper can research the background of the forwarder before accepting its bid.

Once the bid is accepted by the shipper, the forwarder who has won the bid is notified and the necessary infon-nation about the identity of the shipper and other shipping information are provided to the forwarder for the transaction to be completed. In one or more embodiments of the invention, the shipper may submit a price along with the order information to reverse auction his shipping order. In this embodiment, a forwarder who accepts to handle the order for the submitted price will be notified that he has won the bid.

Thus, an on-line shipping model wherein both forwarders and shippers can easily and efficiently place their orders and bids is described in conjunction with one or more specific embodiments. The invention is defined by the claims and their full scope of equivalents.

Claim
CLAIMS

What is claimed is:

A method for handling shipping orders between shippers and forwarder, said method comprising:

a shipper placing a shipping order;
providing one or more forwarders with the shipping order; one or more forwarders placing a bid for the shipping order; providing the shipper with one or more bids submitted by said one or more forwarders; and the shipper selecting one of the bids placed by a forwarder.

2. The method of claim 1, further comprising the step of notifying the forwarder whose bid the shipper has selected.

3. The method of claim 2, wherein the shipping order includes information regarding physical characteristics of an item being shipped.

4. The method of claim 3, wherein the shipping order includes information regarding a time for picking up the item.

5. The method of claim 4, wherein the shipping order includes information regarding a time for delivering the item.

6. The method of claim 5, wherein the shipping order includes information regarding a preferred method of delivery of the item.

7. A method for handling shipping orders between shippers and forwarder, said method comprising:

a shipper placing a shipping order including shipping information; processing the shipping information; and selecting one or more forwarders based on the result produced by the processing step.

8. The method of claim 7, further comprising:

providing one or more of the selected forwarders with the shipping information; one or more forwarders placing a bid for the shipping order; and providing the shipper with one or more bids submitted by said one or more forwarders.

9. The method of claim 7, further comprising:

retrieving shipment price information for the selected forwarders from a pre-existing data base; and providing the shipper with one or more bids based on the retrieved price information.

10. The method of claims 8 or 9, wherein the shipper is provided with one or more of the most competitive bids placed for the shipping order.

11. A method for handling shipping orders between shippers and forwarder, said method comprising:

a shipper placing a shipping order including shipping information; providing one or more forwarders with the shipping information and a first bi deadline; and inviting one or more specific forwarders to bid on the shipping order before a second bidding deadline.

12. The method of claim 11, wherein the second bidding deadline is later than the first bidding deadline.

13. The method of claim 12 further comprising:

providing the shipper with one or more bids submitted by said one or more specific forwarders; providing the shipper with one or more bids submitted by forwarders other than the specific forwarders, if no bids are submitted by the specific forwarders.

14. A shipping system, comprising:

a first system for placing a shipping order by a shipper; a second system connected to said first system for receiving the shipping order from the first system and for displaying the shipping order to one or more forwarders; said second system capable of accepting and forwarding bids placed by said one or more forwarders to said first system for viewing and selection by the shipper.

15. The shipping system of claim 14, wherein said first and second systems communicate via the **internet** .

16. The shipping system of claim 15 further comprising a server system connected to the **internet** for processing information communicated between the first and second systems.

17. The shipping system of claim 16, wherein the shipping order is provided to a selected group of forwarders based on information included in the shipping order.

18. The shipping system of claim 17, wherein one or more selected forwarders place a bid for the shipping order; said shipping bids being provided to the shipper for selection.

19. The shipping system of claim 17, wherein one or more bids are provided to the shipper based on pre-existing price information stored in a data base.

20. The shipping system of claims 18 or 19, wherein the shipper is provided with one or more of the most competitive bids available for the placed shipping order.

21. The shipping system of claim 17, wherein the information included in the shipping order sets a first bidding deadline.

22. The shipping system of claim 2 1, wherein one or more specific forwarders are invited to bid on the shipping order before a second bidding deadline.

23. The shipping system of claim 22, wherein the second bidding deadline than the first bidding deadline.

24. A computer program product comprising:

a computer usable medium having computer readable program code embodied therein configured to handle shipping orders between shippers and forwarders comprising:
computer readable code configured to cause a computer to accept a shipping order placed by a shipper; computer readable code configured to cause a computer to provide one or more forwarders with the shipping order; computer readable code configured to cause a computer to accept a bid from said one or more forwarders for the shipping order; and computer readable code configured to cause a computer to provide a shipper with one or more bids submitted by said one or more forwarder.

25. The computer program product of claim 24 further comprising computer readable.

code configured to cause a computer to select one of the bids placed by a forwarder as requested by the shipper.

26. The computer program product of claim 25 further comprising computer readable code configured to cause a computer to notify the forwarder whose bid the shipper has selected.

27. The computer program product of claim 24, wherein the computer readabi is configured to provide the shipper with the most competitive bid.

28. The computer program product of claim 24, wherein the computer readable code is configured to provide the shipper with one or more bids based on pre existing shipping price information stored in a database.

29. The computer program product of claim 24, wherein the shipping order includes a first bidding deadline; said computer readable code configured to accept bids submitted by said one or more forwarders before the expiration of the first deadline.

30. The computer program product of claim 29 further comprising computer readable code configured to invite a selected group of forwarders to bid on the shipping order before a second shipping deadline expires.

31. A business shipping model for placing shipping orders between shippers and forwarder, comprising the steps of:

a shipper inputting into a computer a conditional purchase offer which includes an offer price; outputting the conditional purchase offer to a plurality of forwarders; and inputting into the computer an acceptance from a forwarder, the acceptance being responsive to the conditional purchase offer.

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00733741   **Image available**
INTERNET **PACKAGE SHIPPING SYSTEMS AND METHODS**
SYSTEME ET PROCEDES D'EXPEDITION DE COLIS UTILISANT L' INTERNET

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English Abstract
  A system and methods for shipping a package (12) from a package sender
  (16) to an intended recipient (18), utilizing **Internet** communications
  (30) to place shipping orders, request on demand package pickup, maintain
  and utilize pre-stored profile information, view shipping history, track
  orders, etc. A package sender (16) with an **Internet** -accessible computer
  (20) accesses an **Internet** site and associated shipping system (10)
  operated by a shipping service provider (14). The package sender (16)
  enters information required for shipping the package (12), including
  shipping options and methods for payment. The options and payment for the
  shipment transaction are validated. If the transaction is validated,
  printer indicia are communicated to the customer's computer (20), which
  is enabled to locally print a prepaid label (25) containing special
  machine-readable (876) as well as human-readable indicia (904). The
  shipping service provider (14) acquires the package by drop-off, standard
  pickup or on call pickup, scans the machine readable indicia, verifies
  other indicia of authenticity, and processes the package (12) in
 accordance with information encoded on the label.

French Abstract
  L'invention concerne un systeme et des procedes qui sont destines a faire
  parvenir un colis (12) depuis un expediteur de colis (16) jusqu'a son
  destinataire (18) et qui utilisent la communication par l'**Internet** (30)

pour passer des commandes d'expedition, exiger sur demande l'enlevement
de colis, maintenir et utiliser des informations preenregistrees sur les
profils, consulter l'historique de l'expedition, assurer le suivi des
commandes, etc. Un expediteur de colis (16) utilisant un ordinateur (20)
avec acces a l'**Internet** accede a un site **Internet** et au systeme
d'expedition associe (10) qu'exploite un prestataire de services
d'expedition (14). L'expediteur de colis (16) introduit les informations
necessaires pour l'expedition du colis (12), y compris les options
d'expedition et le mode de paiement. Ces options ainsi que le paiement
pour la transaction d'expedition sont ensuite valides. Si la transaction
est validee, l'empreinte de l'imprimante est communiquee a l'ordinateur
(20) du client, ledit ordinateur etant autorise a imprimer localement une
etiquette prealablement affranchie (25) qui contient une empreinte
speciale lisible par une machine (876) ou lisible par l'homme (904). Le
prestataire de services d'expedition (14) recoit le colis par remise, par
enlevement standard ou par enlevement sur appel; il numerise l'empreintes
lisible par une machine, verifie les autres empreintes relatives a
authenticite et traite le colis (12) conformement aux informations codees
sur l'etiquette.
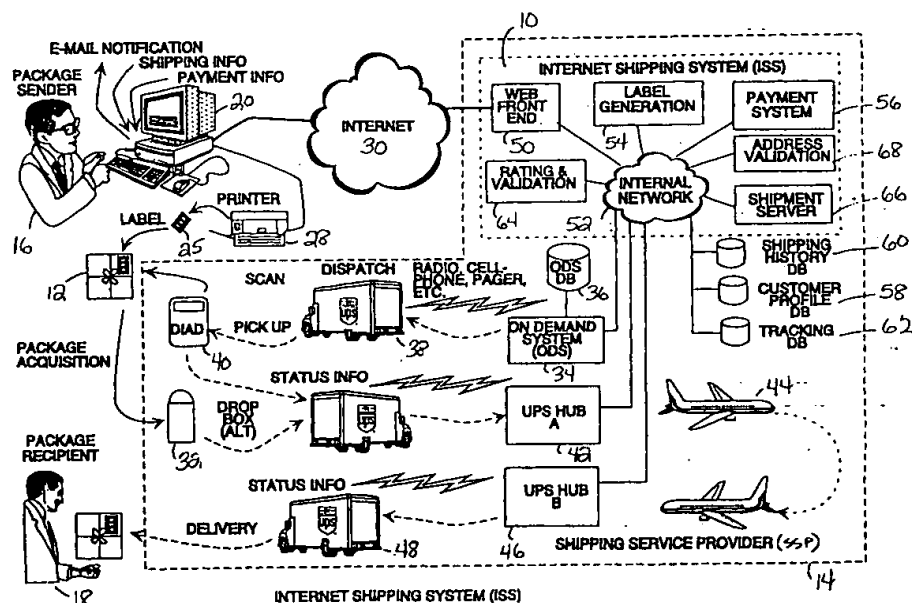
Detailed Description
INTERNET PACKAGE SHIPPING SYSTEMS AND
METHODS"

TECHNICAL FIELD

The present invention relates generally to shipping Z:1 packages, and
more particularly relates to systems and methods that utilize the
Internet to facilitate the shipment of packages by a shipping service
provider.

BACKGROUND OF THE INVENTION

Successful commerce in goods depends on efficient delivery of items to
customers. For bulk shipments to retailers, manufacturers who do not
maintain a fleet of trucks often hire independent carriers. As for

delivery of products to end users, recent years have witnessed a dramatic growth in the volume of products shipped to end user customers from stores, from mail order catalog warehouses, and directly from manufacturers.

Parcel delivery carriers provide delivery services to end user customers, whether they are individuals or businesses.

This surging shipping business has been fueled by the growth of e-commerce conducted over the **Internet** .

Individuals and businesses find it convenient to order goods using a Web browser, and a multitude of e-commerce sites offering a wide variety of goods have one on-line. In addition t- 9 to buying and selling goods and services, more and more fmns; use the **Internet** to manage their businesses.

For all of these transactions, a carrier must be engaged to deliver the ordered goods. I-Estorically, this step has been treated as a second transaction, often as complex and time consuming as the original sale of products. Carriers have offered various levels of service, ranging from around delivery, to overnight delivery, and delivery early the next morning.

Customers may visit a store-front drop-off station, drop of a parcel at a kiosk, or arrange for a regular pick-up by the carrier.

Telephone ordering of pick-up as well as delivery services has been offered.

Some attempts have been made to streamline the process of arranging for pick-up and delivery. In the case of large volume carriers such as manufacturers or large retailers, carriers have provided personal computers and software to the carrier to allow the carrier to connect to the carrier's computer system for the purpose of submitting orders for delivery services, providing details of the items being shipped, printing shipping labels, accessing tracking data to determine the status of shipments, and obtaining reports of shipping activity. These approaches have required special equipment such as a personal computer, tenninal units, or smart telephones, often dedicated to the purpose. Specific application software must be loaded onto each ten-ninal unit or computer. Thus, such solutions cannot easily be made available to large numbers of individuals and small business users.

For the convenience of individuals and small businesses, some **Internet** sites have provided rate calculators that can be used to determine which carrier charges the best rate for a particular parcel. These sites have not provided the means to actually order the services of a carrier, nor have they dealt with the complexities of on-line payment and transaction security that are an essential part of e-commerce.
Carriers have provided access to tracking information via the **Internet** . However, these services have not been integrated with a convenient method for ordering and paying for delivery services.

A particular system with additional features, primarily for carriers who have their own predefined set of shipping requirements, is shown in U.S. Patent Nos. 5,485,369 and 5,631,827. This networked system addresses order processing, order fulfillment, transportation of goods, and tracking. However, this system does not deal with how the carrier is contacted to pick up the goods, and thus does not give the carrier any advance notice of what must be shipped for planning purposes. Nor does this system address the problem of how a carrier employee presented with a parcel bearing a label printed by a customer can determine whether the customer has paid for or committed to pay for the delivery services.

Thus, despite some advances in the field, there remains a need for a

single automated solution for any and all of the above-described delivery
ordering scenarios, accessible to large and small volume users through
equipment already owned by the users. There has been a further need to
solve the foregoing problem by utilizing the power and flexibility of the
Internet . The solution should provide even to individual or occasional
users the convenience and flexibility of the ordering and tracking
systems heretofore available only to large carriers connected to carriers
via modem or private network.

SUMMARY OF THE INVENTION

The present invention seeks to provide a network-based automated solution
for multiple delivery ordering scenarios, accessible to large and small
volume package senders through a computer at their own location,
providing convenience, flexibility, and security in ordering shipping
services and tracking shipments.

According to the present invention, this object is achieved by providing
a shipping system and method accessible by a package sender's computer
through a computer network (wired or wireless), such as the **Internet** .
One aspect of the shipping system and method sends shipping label indicia
over the network to the package sender's computer for printing a shipping
label acceptable to a package shipping service. Another aspect of the
shipping system allows the package sender, from the sender's computer, to
conveniently arrange for pick up of a package by a shipping service.

Generally described, one aspect of the
present invention provides a system and method for processing information
associated with a package handled by a shipping service provider in
connection with delivery of the package to an intended recipient,
comprising: an order-receiving system and method operative to receive a
customer-entered order to ship a package from a network accessible
computer system and communicate the customer-entered order to a dispatch
system; a dispatch system and method responsive to receipt of the
customer entered order for generating a dispatch order for pick up of the
package; and a communication system and method for communicating the
dispatch order to a selected service person, whereby the selected service
person, in response to receipt of the dispatch order, picks up the
package for delivery via the shipping service provider to the intended
recipient.

In a preferred embodiment, the system and method may include a package
information processing component associated with the order-receiving
system for processing information entered by the customer via the network
accessible computer system and validating the information prior to
generating the dispatch order. The order to ship a package may be an on
call order for the shipping service provider to pick up the package at a
place selected by the customer, or at a drop box, and deliver the package
to the intended recipient. The selected service person may have a
communications receiving device for receiving the dispatch order. The
order receiving system may be operative to provide predetermined print
label indicia to the customer's network accessible computer system for
printing a label for affixation to the package, the label including
predetermined authenticity indicia. Moreover, the order receiving system
may be Operative to provide the print label indicia. in response to
validation of information input by the customer via the network
accessible computer system, and the order-receiving system may be
operative to accept information from the label during scanning of the
label upon on call pickup or when processed at a drop box. The system may
also provide a package shipment status information system operative for
receiving status information, such as tracking information, corresponding
to the status of shipment of the package and for providing the status
information for access by the customer.

Preferably, the network is a global computer network such as the
Internet , and the order-receiving system and method is operative to

provide a shipping information interface via an **Internet** site, the shipping information interface being accessible by the customer's **Internet** accessible computer system and including shipment order information fields for customer entry of shipment order information associated with shipment of the package, the shipment order information fields being pre-populated
with customer profile information retrieved from a customer profile information database associated with the order-receiving system. The shipping information interface preferably may be operative to allow a customer to access functions of the order-receiving system selected from the group comprising: view shipping history, track a shipment, use similar shipment to process a new shipment, void a shipment, reprint a label, reprint a receipt, view or edit profile information, view or edit an address book, set or change shipping or payment preferences, or change a password. The system and method may further provide an address validation component operative for processing the ship to address field and determining whether an address of a package recipient is a valid address, and further operative for providing an indication of address invalidity in the event that the address of the package recipient is invalid.

The order-receiving system and method may also be operative to provide a shipment summary interface via the **Internet** site, the shipment summary interface being accessible by the customer's **Internet** accessible computer system and including editable shipment summary information fields associated with an order to ship a package. The shipment summary interface may be operative to display service options for selection by the customer selected from the group comprising:
changing information associated with shipment of the package, adding another package to the shipment, selecting to view a drop-off locator, and selecting service for delivery of the package sooner.

In the preferred embodiment, there may also be provided a payment system and method associated with the order-receiving system for receiving payment information from the customer and processing a customer payment for shipment of the package. The order receiving system and method preferably is operative to provide a payment interface via the **Internet** site, the payment interface being accessible by the customer's **Internet** accessible computer system and including selectable payment options associated with an order to ship a package. The payment options preferably are selected from the group comprising: payment from a customer's existing account with the shipping service provider, payment via credit card on file with the shipping service provider. and payment via other credit card.

The order-receiving system and method
preferably also is operative to provide a shipping history interface via the **Internet** site, the shipping history interface being accessible by the customer's **Internet** accessible computer system and including shipping history C, Z:I information fields for allowing customer selection of shipping history display options. The shipping history display options include a track shipment option, and the order-receiving system is operative to display shipment tracking information associated with a selected prior order by the customer in response to selection of the track shipment option. The interface allows the customer to conveniently ship again to the same destination.

Generally described, another aspect of the present invention provides a method for shipping a package from a shipping service provider's customer to an intended recipient, comprising the steps of: receiving a customer-entered order to ship a package from an **Internet** accessible computer system operated by a customer; validating shipping information associated with the customer-entered order; and in response to validating the shipping information, communicating printer indicia to the customer at the **Internet** accessible computer system such that the customer is enabled to print a label for affixation to the package, the label

containing predetermined label shipping information.

Generally des cribed, another aspect of the present invention provides a method for facilitating customer creation of a label for use on a package to be delivered by a shipping service provider from a customer to an intended recipient, comprising the steps of: obtaining shipping information from a customer corresponding to an order to deliver a package via an **Internet** accessible computer system operated by the customer; validating the shipping information received from the customer; in response to validating the shipping information, communicating print label indicia to the customer at the **Internet** accessible computer system, the print label indicia including predetermined authenticity indicia, ship to address indicia, and level of service indicia. In a preferred embodiment, the label is printed by a customer using the print label indicia at a printer associated with the **Internet** accessible computer system, and the authenticity indicia are machine readable. The predetermined authenticity indicia preferably are recognized by an order-receiving system of the shipping service provider as indicative of prepaid shipping, and enable personnel of the shipping service provider to recognize that the label is authentic, the authenticity indicia. comprising: a billing prepaid indicator region for containing information indicating that the shipment service provided by the shipping service provider has been prepaid; and a predetem-lined identifying region for containing identifying indicia associated with the shipping service provider.

The preferred method includes displaying information corresponding to selected regions of the label in an **Internet** browser computer program window opened when the customer accesses an **Internet** -accessible computer shipping system operated by the shipping service provider, and the step of- automatically formatting a printer for landscape orientation for the label, which is folded in half after printing to form a complete label, whereby the label is receivable in a standard plastic window for an adhesive plastic label provided by the shipping service provider.

Generally described, another aspect of the present invention provides a label for use with a package for handling by an automated package delivery system operated by a shipping service provider, the label being printable by commonly available printers associated with a personal computer system, comprising: a return address region for containing information corresponding to a return address of a packa ge sender; a ship to address region for containing information corresponding to a destination address of an intended recipient for the package; a machine readable postal code region for containing the postal code of the destination address of the intended recipient for reading by optical scanning equipment operated the shipping service provider; a machine readable tracking number region for containing a tracking number associated with the package in a machine readable format for reading by optical scanning equipment operated by the shipping service provider; and authenticity indicia for enabling personnel of the shipping service provider to recognize that the label is authentic, the authenticity indicia comprising: a billing prepaid indicator region for containing information indicating that the shipment service provided by the shipping service provider has been prepaid; and a predetermined identifying region for containing identifying indicia associated with the shipping service provider. The label may also contain a third machine readable encoded region for containing text of the label and other package information in a form readable by an optical scanning device operated by a person associated with the shipping service provider, a human readable sort code region for containing information relating to identification of a hub and sortation belt of automated packaged handling equipment associated with the shipping service provider, a level of service indicating region for containing information corresponding to a selected level of service provided by the shipping service provider for the package, and a number of packages region for containing information corresponding to the number of packages contained in a shipment of a plurality of packages. The

tracking number preferably includes an indicium identifying the number as a tracking number, a customer account number, a level of service indicator corresponding to the level of service indicated in the level of service indicating region, and a predetermined reference number determined by the shipping service provider. The customer account number may include payment indicia corresponding to a type of payment by a customer of the shipping service provider for shipment of the package, the payment indicia corresponding, for example, to a pre established account of the customer with the shipping service provider, or a credit card payment.

Generally described, another aspect of the present invention provides a method for delivering a package by a shipping service provider from a customer to an intended recipient, comprising the steps of communicating printer indicia to a customer via an **Internet** connection for printing a label remotely from the shipping service provider, the printer indicia comprising at least machine readable indicia containing shipping information encoded thereon and authenticity indicia; scanning the machine readable indicia on a label affhxed to the package at the point of acquisition of the package to obtain the shipping information encoded on the label; verifying the authenticity of the label at the point of acquisition of the package by reference to the authenticity indicia on the label; and in response to verifying the authenticity of the label, introducing the package into the shipping service provider's package handling systems for delivery of the package. In alternate preferred embodiments, the step of verifying the authenticity of the label comprises visual inspection of the label for the presence of predetermined identifying indicia associated with the shipping service provider, or processing the machine readable indicia to verify that the label includes the predetermined authenticity indicia. In either case, the method preferably also includes the steps of: obtaining shipping information from the customer corresponding to an order to deliver the package via an **Internet** accessible computer system operated by the customer; validating the shipping information received from the customer; and in response to validating the shipping information, communicating print label indicia to the customer at the **Internet** accessible computer system, the print label indicia including the predetermined authenticity indicia. The label may be printed by a customer using the print label indicia at a printer associated with the **Internet** accessible computer system, and the predetermined authenticity indicia may be recognized by an order-receiving system of the shipping service provider as indicative of prepaid shipping.

Generally described, another aspect of the present invention provides a method for shipping a package from a package sender to an intended recipient via a shipping service provider, the package sender having an **Internet** -accessible computer system, comprising the steps of. providing an **Internet** -accessible shipping computer system (ISS) associated with the shipping service provider, the ISS operative for receiving shipping information from a package sender via the package sender's computer system; displaying a data entry form on the package sender's computer system for entry of shipping information by the package sender; receiving shipping information entered by the package sender; transmitting the shipping information from the package sender's computer system to the ISS via the **Internet** ; validating predeterinined shipping information; in response to validating the predetermined shipping infortnation, communicating predetermined shipping label information for display on the package sender's computer system and printing of a customized shipping label; and acquiring the package and associated customized shipping label for introduction into the shipping service provider's package handling system, whereby the shipping service provider accepts and handles the package with the customized shipping label associated therewith in the same manner as a package having a preprinted shipping label. The shipping information preferably includes information selected from the group comprising,: information relating to characteristics of the package, information corresponding to the package sender, information relating to

the intended recipient, information relating to payment for the shipping service, and information relating to a service type. In a preferred embodiment, the package sender provides information for verifying that the package sender is authorized to order service from the shipping service provider. The package sender may also select as a mode of entry of the package into the shipping service package dropoff at a dropoff location, or on demand pickup, in which case the method provides the step of automatically dispatching a package pickup to the package sender to pick up the package in response to a determination that on demand pickup of the package has been requested by the package sender.

Generally described, another aspect of the present invention provides a method for verifying the validity of a shipment of a package from a package sender to an intended recipient via a shipper service provider, comprising the steps of- communicating predetennined printer indicia to the package sender, the printer indicia operative for enabling the printing of a customized label on a printer coupled to a computer system associated with the package sender, the customized label including predetermined machine readable security indicia; prior to processing the package for shipment, reading the machine readable security indicia on the customized label with a reading device associated with the shipping service provider; verifying the machine readable security indicia with a verifying device associated with the shipping service provider; and in response to detection of invalid security indicia with the verifying device, indicating the package as invalid. In a preferred embodiment, the method further comprises the step of, in response to verifying the indicia, delivering the package to the intended recipient in accordance with delivery information on the label. The verifying device may be a DIAD, and the step of verifying may be carried out at the point of acquisition of the package by display of information on the DIAD.

Other goals, features, and advantages of the present invention will become apparent upon reviewing the following detailed description of the preferred embodiments of the invention, when taken in conjunction with the drawings and the appended claims.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. I generally illustrates the shipping of a parcel or package carried out by preferred embodiments of the present invention.

FIG. 2 depicts the system architecture of a preferred embodiment of the present invention.

FIG. 3 is a block diagram illustrating aspects of the invention for dispatching the pickup of a package order with an On Demand Services system constructed in accordance with a preferred embodiment of the present invention.
FIG. 4 illustrates various **Internet** shipping system functions, processes, and routines of preferred embodiments of the present invention.

FIG. 5 is a flow chart of a HOME PAGE routine employed in a preferred embodiment of the present invention.

FIG. 6 is a flow chart of a LOG IN routine employed in a preferred embodiment of the present invention.

FIG. 7, consisting of FIG. 7A and 7B, is a flow chart of a REGISTRATION routine employed in a preferred embodiment of the present invention.

FIG. 8, consistinc, of FIG. 8A and 8B, is a flow chart of a MEMBER SERVICES routine employed in a preferred embodiment of the present invention.

FIG. 9 is a flow chart of a MEMBER PROFILE routine employed in a preferred embodiment of the present invention.

FIG. 10 is a flow chart of a SHIPPING PREFERENCES routine employed in a preferred embodiment of the present invention.

FIG. 11 is a flow chart of a PAYMENT METHOD routine employed in a preferred embodiment of the present invention.

FIG. 12 is a flow chart of a CHANGE PASSWORD routine employed in a preferred embodiment of the present invention.

FIG. 13 is a flow chart of an ADDRESS BOOK routine employed in a preferred embodiment of the present invention.

FIG. 14 is a flow chart of a CANCEL MEMBERSHIP routine employed in a preferred embodiment of the present invention.

FIG. 15, consisting of FIGS. 15A-15F, is a flow Z:, chart of a SHIPPING routine employed in a preferred embodiment of the present invention.

FIG. 16, consisting of FIGS. 16A-16C, is a flow chart of a SHIPMENT SUMMARY routine employed in a preferred embodiment of the present invention.
FIG. 17 is a flow chart of A DROP-OFF LOCATOR routine employed in a preferred embodiment of the present invention.

FIG. 18 is a flow chart of a PACKAGE PICKUP routine employed in a preferred embodiment of the present invention.

FIG. 19, consisting of FIGS. 19A and 19B, is a flow chart of a PAYMENT routine employed in a preferred embodiment of the present invention.

FIG. 20 is a flow chart of a PRINT LABELS/RECEIPT routine employed in a preferred embodiment of the present invention.

FIG. 21 is a flow chart of a SHIPMENT FINISHED routine employed in a preferred embodiment of the present invention.

FIG. 22 is a flow chart of a SHIPPING HISTORY routine employed in a preferred embodiment of the present invention.

FIG. 23 is a flow chart of a RATE & VALIDATE routine employed in a preferred embodiment of the present invention.

FIG. 24 is an exemplary screen display of a HOME page or screen as generated by a preferred embodiment of the present invention.

FIG. 25 is an exemplary screen display of a LOG IN page or screen as generated by a preferred embodiment of the present invention.

FIG. 26, consisting of FIGS. 26A-26C, is an exemplary screen display of a SHIPPING INFORMATION page or screen as generated by a preferred embodiment of the present invention.

FIG. 27, consisting of FIGS. 27A and 27B, is an exemplary screen display of a SHIPMENT SUMMARY page or screen as generated by a preferred embodiment of the present invention.

FIG. 28 is an exemplary screen display of a DROP OFF LOCATOR page or

screen as generated by a preferred embodiment of the present invention.

FIG. 29 is an exemplary screen display of an ON CALL AIR PICKUP page or screen as generated by a preferred embodiment of the present invention.
FIG. 30 is an exemplary screen display of a PAYMENT INFORMATION page or screen as generated by a preferred embodiment of the present invention.

FIG. 31 is an exemplary screen display of a CONFIRM PAYMENT page or screen as generated by a preferred embodiment of the present invention.

FIG. 32 is an exemplary screen display of a PRINT LABELS AND RECEIPT page or screen as generated by a preferred embodiment of the present invention.

FIG. 33 is an exemplary screen display of a RECEIPT page or screen as generated by a preferred embodiment of the present invention.

FIG. 34 is an exemplary screen display of a SHIPMENT FINISHED page or screen as generated by a preferred embodiment of the present invention..

FIG. 35 is an exemplary screen display of a SHIPPING HISTORY page or screen as generated by a preferred embodiment of the present invention. .

FIG. 36, consisting of FIGS. 36A and 36B, is an exemplary screen display of a SHIPMENT DETAILS page or screen as generated by a preferred embodiment of the present invention.
FIG. 37 is an exemplary LABEL DISPLAY page, with an exemplary shipping label, as generated by a preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE DISCLOSED

EMBODIMENT
Overview
The present invention is directed to data processing systems and methods for use in delivery of parcels or packages from a package sender to a package recipient, delivered by a shipping service provider or carrier. For purposes of the discussion which follows, the terms "carrier" and "shipping service provider" are generally synonymous, and refer to an entity engaged in the delivery of packages. The terms "package sender" and "customer" and "user" of a shipping service provider are also generally synonymous, except that there will be circumstances when a package sender is not the shipping service provider's direct customer, e.g. when an employee of a company ships a. package on behalf of the company, the employee may be the package sender while the company may be the customer of the shipping service provider..

Referring now to the drawings, wherein Eke numerals represent like elements throughout, preferred embodiments of the present invention will now be described. By way of introduction, FIG. 1 pictorially represents the shipping of a parcel or package 12 carried out by a preferred embodiment of the present invention constructed as an **Internet** shipping system (ISS) 10, operated by a shipping service provider (SSP) 14. The parcel 12 is shipped from a package sender 16 to a package recipient 18, utilizing a network accessible computer or computer-based workstation 20 to communicate with the ISS 10 and provide information required for shipping the package.

In order to communicate with the ISS 10, the package sender 16 employs a computer or computer-based work station 20, to which is connected one or more peripherals that permit interface with the package sender 16. For example, connected to the computer 20 in this embodiment is a video monitor, a pointing device such as a mouse, and a data entry device such as a keyboard. Also connected to the computer is a printer 28. The printer is operative in the usual manner to print a label 25 for affminc, to the package 12. These peripherals are connected to the computer 20 in a manner well known to those skilled in the art.

The computer 20 is preferably connected to a global communication network 30 such as the **Internet** , to which the shipping service provider (SSP) 14 is also connected. Those skilled in the art will recognize and appreciate that the meaning of "communication network" is expansive, including but not limited to a LAN, a geographically dispersed WAN such as an enterprise-wide computer network, a public switched network (PSN) such as a telephone system, a linked cellular system, a wireless data network, or combinations of various computer networking technologies. The illustrated embodiment employs the **Internet** . It will therefore be understood that when the term **"Internet** " is used herein, other types of computer and communications networks are also contemplated and considered equivalent.

Although the preferred embodiment is described in connection with a personal computer 20 that is operative with an **Internet** browser computer program, it should be understood that the invention may be implemented with other types of networked devices, for example but not of limitation, an "**Internet** Shipping Terminal" (IST), a webphone type device, a web TV device, a label pninter, and other types of data processing and printing devices which can be coupled to a 271 Z:1 computer communication network, wired or wireless.

Generally speaking, a package sender 16 can ship a package 12 from one location to a recipient 18 at a different location by employing the services of a SSP 14 that operates the system 10 and carries out the various methods described herein.

First the package sender 16, interfacing with the computer 20, contacts the SSP 14 through the **Internet** 30. In response to prompts and queries by the SSP 14, the package sender 16 provides information regarding themselves, the parcel 12 to be delivered, and the recipient 18. In response, the SSP 14 may authorize the package sender 16 to print a shipping label that will be acceptable to the SSP 14 as authorization to process the package 12. The label 25, printed by the package sender's printer 28, is affixed to the package 12 which is then acquired by the SSP 14 for delivery to the recipient 18.

By way of illustration and not limitataion, the package 12 is typically tendered to or acquired by the SSP by way of one of three methods. The package sender 16 may tender the package 12 to an SSP representative who accepts the package during the normal course of delivery rounds, the package sender 16 who then tenders the package 12 to the location 32 of their choice, or the package sender 12 may send an order requesting the SSP dispatch a representative to the package sender's location at a specified date within a specified time period to pick up the package 12. In the latter two examples, the package sender 16 sends an order to the ISS 10 via the **Internet** 30 which informs the SSP 14 that a parcel 12 is available for pickup and delivery.

In the case of a request for package pickup as illustrated in FIG. 1, within the ISS 10 the order is relayed to an On-Demand System (ODS) 34. The ODS 34 which is in communication with an ODS database 36, as explained below with reference to FIGS. 2 and 3, is operated to search, identify and dispatch a pickup vehicle 38 to acquire the package 12. In a preferred embodiment the pickup vehicle is a driver and package car or truck. It will be noted that the location of the parcel 12 and the location of the sender 16 may be different. In a preferred embodiment the package sender 16 will direct the SSP 14 to the location of the package 12. Upon acquiring the package 12, the driver employs a delivery information acquisition device (DIAD) 40 to capture data located on the label regarding the package 12, package sender 16, and recipient 18 as necessary to facilitate the delivery.

Other information contained on the label 25. which may be acquired by the DIAD 40 or viewed by a SSP representative, permits the SSP 14 to confirm

whether the SSP 14 authorized the printing of the label and therefore the delivery of the package.

Assuming the package 12 with label 25 has been validated for delivery, the SSP takes possession of the package 12 and transports it to an initial sorting hub 42. A sorting hub is well known by those skilled in the art and typically comprises a strategically located facility that receives packages on a local, regional, national, or global level, and directs those packages for transportation to another hub via suitable delivery methods, for example aircraft 44. It will be understood that suitable delivery methods include people, road vehicles, off-road vehicles, planes, ships, trains, or any other method of transportation currently known or to be developed in the future. However, as illustrated in the preferred embodiment, an aircraft 44 typically delivers the parcel 12 to a subsequent sorting hub 46 associated with a distant recipient 18. At the sorting hub 46, the package 12 is sorted and routed to a delivery vehicle 48 dispatched to tender the package 12 to the intended recipient 18.

Still referring to FIG. 1, the ISS 10 provides many functions and processes for carrying out the delivery methods of the present invention. These functions are typically implemented as routines, processes, and database searches within the ISS 10 and systems coupled for communications to the ISS, e.c-,,. a shipping history database 60 or a tracking database 62. In particular, a preferred embodiment provides an **Internet** World Wide Web (WWW) front end 50 that generates the browser views for display on the package sender's computer 20. The web front end 50 is coupled to an internal network 52 operated by the SSP, which is coupled to other computing functions as described below.

A label aeneration function 54 is provided for communicating print label indicia to the package sender's computer 20 in response to acceptance of a shipping order from the customer. The label aeneration function 54 causes the customer's computer 20 to display a customized label image containing certain machine-readable and human-readable information needed for processing and shipping the package. V acceptable by the sender, the sender prints the displayed label 25 at the printer 28.

A payment system 56 provides for processing payment instructions and collecting payment from the customer by charging a valid credit card account, or charging the customer's pre-established SSP account. In another embodiment, payment authorization may be performed by the payment system 56 and actual charging to an account may be performed by a billing system (not shown).

A customer profile database 58 stores information associated with each customer such as their identity, location, default method of payment and preferred shipment delivery type or method, An address validation function 68 receives address information from the customer and determines whether the address of the intended recipient is valid.

A shipping history database 60 stores information regarding each customer's of prior shipments and makes that information available to the customer upon the customer's request. A record of prior shipments may be maintained for whatever length of time is desirable to the SSP.

A tracking database 62 stores information regarding each customer's current shipment, such as the present location and expected delivery time, and makes that information available upon the customer's request. Tracking is achieved, as well known by those skilled in the art, by scanning and otherwise capturing identification indicia on each package to identify the location of the package and communicate that location to the user upon request.

A rating and validation engine (RAVE) function 64 is operative to process information about the delivery order and determine the shipping rate

based on the selected delivery options.

A shipment server 66 receives information regarding an order and communicates package pickup information to the on demand system (ODS) 34. The shipment server also receives status information from the ODS, the vehicles 38, 48, and the hubs 42, 46 for entry into the tracking database 62.

The various functions of the ISS 10 cooperate to provide the functions of receiving a customer order via the **Internet** 30, processing the order to determine order acceptability, obtaining payment for the level of service requested, transmitting print label information to the customer's computer 20 so that a shipping label 25 may be printed from the printer 28, generating a pickup order for the package, receiving status information from other components within the SSP's system so that the package may be tracked, and creating-, a shipping history associated with each customer. Further details of these and other functions are provided below.

ISS System Architecture
FIG. 2 illustrates a preferred embodiment of the hardware and network architecture of the ISS 10. A customer desiring to place a delivery order with the SSP 14 accesses the **Internet** 30 through their computer 20 via their **Internet** service provider (ISP, not shown). A customer's order is routed through the **Internet** 30 and one or more outer firewall machines 70 which provide network security in the known manner.
The outer firewalls 70 are connected to an internal network 52 which forms the entrance to the SSP's main **Internet** web site, e.g., http:Hwww.ups.com. The main **Internet** web site in the preferred embodiment provides an interface for storage and retrieval of "package level detail" (PLD) information, that is, information concerning specific shipments of specific customers, their status and shipping history.

The shipping server's main **Internet** web site is generated by a World-Wide Web (WWW) content server and one or more clones for load balancing. Together, the servers and clones comprise the web front end 50 which provides the web pages of the SSP's main web site, and contain plug-ins for running ISS applications and plug-ins for running **Internet** member services (IMS) applications.

The internal network 52 is connected to a mainframe computer 74, which stores the PLD information associated with the shipment of packages, shipping orders, customer address books, payment method and other information required by the SSP 14 for shipping packages. Other shipment related information such as member profile information may be stored in a different but linked computer, e-g customer profile database 58.

The WWW application servers in the web front end may route data pertaini na to shipping orders and delivery to the mainframe computer 74 and retrieve data as required. For example, package specific information, i.e., package level detail (PLD), is uploaded to the mainframe computer 74 for each package 12 processed by the ISS 10. The mainframe computer 74 also stores tracking information that the SSP 14 updates during transportation of the package that allows the SSP 14, user 16, recipient 18, or a third-party to track the location of the package via the **Internet** . Thus, the mainframe computer 74 provides functions including searching the tracking database 62 and the shipping history database 60 discussed with reference to C, FIG. 1.

Further, the mainframe computer 74 is responsible for implementing aspects of the ODS 34 such as receiving an order to pick up a package, selecting the appropriate vehicle and/or personnel for picking up the package, and communicating a dispatch order to the selected vehicle and/or personnel to pick up the package. Aspects of the ODS system 34 required for communicating information such as the pickup orders to the appropriate personnel and the returning status information regarding

picked up packages, are provided via a data link between a dispatch system 102 (FIG. 3) and the ISS 10.

With continued reference to FIG. 2, the internal network 52 connects the ISS 10 to a credit card processing company's pre-authorization system 76. This connection permits the SSP 14 to validate a customer's credit card and receive payment for the delivery of a package 12.

The internal network 52 also connects ISS application servers 78 to the Internet for provision of the web front end 50. The application servers 78 each provide various ISS applications, profile manager for account maintenance, and a credit card "store-front" to enable customers to pay for shipping services with a credit card. Those skilled in the art will understand that various computing functions provided in the disclosed system may be allocated between WWW front end servers 50 and application servers 78, in a manner as desired for performance, security, scaling, etc. A merchant engine server 80 and one or more load balancine, clones are provided for credit card validation. These servers 80 provide a credit card engine for obtaining credit card authorization while the mainframe 74 performs settlement for customer payments received via credit card. Billing information processed from PLD information in the mainframes 74 can be transmitted to customers or to credit card settlement functions.

The internal network 52 also connects primary and secondary ISS database servers 82 which provide database management and access to a credit card transaction database 84, the state database 86, and a customer profile database 88, called the "Internet member services" database (IMS). The IMS or customer profile database 88 stores customer-specific information including the user name and password, preferred billing methods, preferred shipping methods, and preferred access methods. In accordance with the invention, information stored in the customer profile database 88 is retrieved in response to customer log in and used to populate data fields of various screens for user convenience and ease of use.

As explained in more detail with reference to FIG. 3, the internal network 52 is connected to the ODS 34 which, in turn, is connected to a communication means such as the telephone company (telco) 90 and a cellular telephone network (not shown). Via this connection the ODS dispatches pickup and delivery vehicles.

Still referring to FIG. 2, the preferred system includes an e-mail server 94 for transmitting and receiving e-mail messages. In a preferred embodiment, and as will be understood by those skilled in the art, an e-mail message 92 may be sent through the e-mail server 94 to the package sender's computer to confirm the sender's order or for other communication purposes, or to a recipient's computer 96 that a package is forthcoming. Further, and alternatively, an e-mail message 92 may be sent to any combination of sender, recipient, or third party regarding the status of the package at any point along the delivery process including final delivery. Thus, the notion of e mail notification to various parties of various aspects of package shipment, for example, order acceptance, package pickup, package en route, package delivery expected date and/or time, package delivery confirmatin, package delivery type, package contents, etc. is considered within the scope of the present invention.

From the foregoing it will be appreciated that there has been described a system architecture for implementing an Intemet-based package shipping system, with various functions for receiving orders to ship packages, arranging for payment of package shipping, arranging for dispatch of vehicles and/or personnel for package pickup, and tracking the progress of a shipment all while providing an easy-to-use and navigate Internet -accessible interface for the customer.

ODS System Architecture

FIG. 3 is a block diagram which generally illustrates the communication flow of a shipment order within the ODS 34 constructed in accordance with the preferred embodiment of the present invention. The sender, in communication with the web front end 50 via the **Internet** 30, sends a message from their computer 20 requesting pickup service for a certain day and time. The ODS request is made and if successful the payment method is verified and PLD information is uploaded. The ISS 10, after it has collected and validated all the necessary payment, address, and package characteristics for processing the shipment, checks that the requested order date and time is available by searching a database on the mainframe 74. Upon completion of the validation processes, which includes a search of the shipping history database 60 to verify whether the particular shipping label has already been used, the authorization is sent to the sender's computer 20 to print a label on the sender's printer 28 while the order is forwarded to a dispatch system 102 forming a part of the ODS 34.

The dispatch system 102 is a system coupled to the ODS database 36 and to other databases (not shown) that store information about the location and dispatchability of persons and/or vehicles for package pickup and/or delivery. By reference to these databases, the dispatch system, upon receipt of a dispatch order, logs the order into the ODS database 36 and determines which person and/or vehicle is available to pick up the package within the data, time, and location parameters provided in the pickup order.
At the dispatch system 102, the order is processed, queued, and after a person and/or vehicle is selected for pickup, directed to a mobile message switch (MMS) 104, also a part of the ODS 34. The MMS is operative for transmitting the dispatch order to a selected person and/or vehicle via a communication means, such as radio, an e-mail message delivery system, a cellular telephone system, a pager system, a wireless personal communication system (PCS), an ARDIS network, Bluetooth devices, slotted ALOHA, or other proprietary or non proprietary data communications system. Those skilled in the art will understand and appreciate that the term "communication means" is expansive and the examples provided are by way of illustration and not limitation. The communication means illustrated and other equivalent message delivery methods may be employed to communicate a dispatch order to a selected person and/or vehicle for package pickup.

In the illustrated embodiment, the order is sent from the MMS 104 through a telephone connection to the telephone company (telco) 90 to a mobile telephone switching office (MTSO) 106. From the MTSO 106 the order is communicated via a cellular telephone link to a DIAD vehicle adapter (DVA) 108 associated with a vehicle that has been selected by the dispatch system to pick up the package. The DVA 108 is a communication device located within each SSP vehicle, and interfaces between a DIAD 40 and the communication means for linking to the SSP 14. As will be understood by those skilled in the art, a DIAD is a Delivery Information Acquisition Device operative to scan and acquire information from machine-readable regions of the package label, receive entry of information by SSP representatives, receive and capture a package recipient's signature, and display information to the SSP representatives, among other things.

Upon dispatch, the SSP's vehicle (e.g. vehicle 38 in Ln FIG. 1) arrives at the package's location during the date and time range specified in the order. The SSP's representative begins processing the package(s) using the DIAD 40 to acquire data via input devices such as an associated keyboard, barcode scanner, and a signature capture device. Upon capturing the data related to the package, the DIAD 40 is redocked with the DVA 108. The information contained in the DIAD is then communicated to the SSP's data center via the associated communication means.

In accordance with the invention, the DLAD captures package acquisition information including label information, which is used to validate the

package. In particular, the SSP may wish to ensure that the particular label has not been duplicated and fraudulently used on another package. The disclosed label, described in detail below, includes predetermined machine readable indicia, implemented as a barcode region, that serves as a unique indicia (e.g. the 1Z tracking number) which can be used to ensure that only a single instance of the label is accepted into the SSP's system. Accordingly, the package acquisition inforination and label information is communicated upstream from the DIAD, the DIAD vehicle adapter, through the ODS system, and to the mainframe 74 in the ISS 10. At the mainframe 74, the label information, for example the I Z number which is a unique number, is used to index into a database, for example the shipping history database 60, to ensure that there are no multiple instances of the number in the database. If so, there is a possibility of fraud; if not, the package is validated.

The results of the database lookup are transmitted back downstream to the DIAD 40, where a "package invalid" message may be displayed on the DIAD display to indicate the package as invalid. In this case, the SSP personnel may decline to accept the package. Of course, in the event that the package is validated, for example by verifying that the IZ number remains unique in the system, a similar "package valid" message may be communicated downstream to the DIAD to signal the SSP personnel to proceed with acquisition of the package.

From the foregoing, those skilled in the art will ZD understand that there has been described a system and method for verifying the validity of a shipment of a package from a package sender to an intended recipient which first involves communicating predetermined printer indicia to the package sender, the printer indicia operative for enabling the printing of a customized label on a printer coupled to a computer system associated with the package sender. The label includes predetermined machine readable security indicia, for example the bar coded 1Z number, to be described below in connection with the label. Prior to processing the package for shipment, the machine readable security indicia on the customized label is read with a reading device associated with the shipping service provider, for example the DIAD. The machine readable security indicia is verified by transmitting the machine readable indicia to the ISS 10 and databases associated therewith, and determining whether the indicia is valid, for example whether the I Z number is duplicated in the system. In response to detection of invalid security indicia with the verifying device, the package is indicated as invalid, for example by communicating a "package invalid" message downstream for display on the DIAD.

INTERNET SHIPPING SYSTEM METHODS
Overview
With the foregoing description in mind, turn now to
FIG. 4 for a discussion of the various computer-implemented processes for carrying out the methods of the preferred embodiments of the present invention. Although the preferred embodiments are generally described withreference to an **Internet** accessible personal computer (PC) operated by a customer or package sender and a **Internet** web site operated by a SSP, those skilled in the art will recognize that the present invention can also be implemented in conjunction with other program modules for other types of computers.

Furthermore, those skilled in the art will recognize that the present invention is preferably implemented in a distributed or networked computing environment such as the **Internet** . In a distributed or networked computing environment like the **Internet** , program modules may be physically located in different local and remote memory storage devices. Execution of the program modules may occur locally in a stand-alone manner or remotely in a client/server manner. By way of illustration and not limitation, distributed computing environments include local area networks (LAN) of an office, enterprise-wide area networks (WAN), and the global **Internet** (wired or wireless

connections). Accordingly, it will be understood that the terms computer, operating system, and application program include all types of computers and the program modules designed to be implemented by the computers. The discussion of methods which follows is represented largely in terms of processes and symbolic representations of operations by conventional computer components, including a central processing unit (CPU), memory storage devices for the CPU, connected display devices, and input devices. Furthermore, these processes and operations may utilize conventional computer components in a heterogeneous distributed computing environment, including) remote file servers, remote computer servers, and remote memory storage devices. Each of these conventional distributed computing Z:

components is accessible by the CPU via a communication network.

The processes and operations performed by the computer include the manipulation of signals by a CPU, or remote server such as an **Internet** web site, and the maintenance of these signals within data structures reside in one or more of the local or remote memory storage devices. Such data structures impose a physical organization upon the collection of data stored within a memory storage device and represent specific electrical or magnetic elements. These symbolic representations are the means used by those skilled in the art of computer programming and computer construction to most effectively convey teachings and discoveries to others skilled in the art.

For the purposes of this discussion, a process is understood to include a sequence of computer-executed steps leading to a desired result. These steps generally require physical manipulations of physical quantities. Usually, though not necessarily, these quantities take the form of electrical, magnetic, or optical signals capable of being stored. transferred, combined, compared, or otherwise manipulated. It is conventional for those skilled in the art to refer to these signals as bits, bytes, words, values, elements, symbols, characters, terms, numbers, points, records, objects, images, files or the Re. It should be kept in mind, however, that these and similar terms should be associated with appropriate physical quantities for computer operations, and that these terms are merely conventional labels applied to physical quantities that exist within and during operation of the computer.

It should also be understood that manipulations within the computer are often referred to in terms such as adding, comparing, moving, positioning, placing, and altering which are often associated with manual operations performed by a human operator. The operations described herein include machine operations performed in conjunction with various input provided by a human operator or user that interacts with the computer.

In addition, it will be understood that the programs, processes, routines and methods described herein are not related or limited to any particular computer or apparatus, nor are they related or limited to any particular communication network architecture. Rather, various types of general purpose machines may be used with program modules constructed in accordance with the teachings described herein. Similarly, it may prove advantageous to construct a specialized apparatus to perform the method steps described herein by way of dedicated computer systems in a specific network architecture with hard-wired logic or programs stored in nonvolatile memory, such as read only memory.

With the foregoing in mind, FIG. 4 illustrates various functions, processes, or routines carried out by preferred embodiments of the present invention which the package sender 16 or the ISS 10 executes in order for the SSP 14 to deliver a package 12. FIG. 4 also illustrates these functions in a typical order of execution. The functions or processes in this figure are carried out in the disclosed embodiment of the present invention by software executing on the ISS 10, in conjunction with a browser computer program executing on a package sender's computer 20, when each are connected to the **Internet** 30 and in communication

with each other. It will be understood that the processes and methods presented here may be arranged differently. In other words, some processes and methods may be deleted, repeated or blended to form similar processes and methods.

Home page 150 includes the process by which the SSP's **Internet** home page is generated and displayed to a user or customer. From the home page the user may initiate the shipping process or other related process. A HOME PAGE routine is described below in greater detail with reference to FIG. 5.

Registration 158 includes the process by which a customer establishes an **Internet** Services Account (ISA) with the SSP. The ISA, which includes but is not limited to an **Internet** Services Account Profile (ISAP), shipping preferences, and certain default information, is included in a preferred embodiment to access and use the ISS 10. In this description, terms such as "package sender", "customer", "user", and 4'owner" designate the party interfacing with the ISS to ship a package. Registration is described below in greater detail with reference to FIG. 7.

Upon registration, a customer chooses a user ID and password. This means of identification allows the customer's preferences for payment, shipment methods, address book, etc. to be retrieved from the mainframe 74 (FIG. 2) and utilized for a package shipment when the customer logs into the ISSIO.

Log in 180 includes the process by which a customer may be identified and authenticated before they receive access to their ISA and are permitted to conduct shipping transactions. Log-in is described below with reference to FIG. 6.

Member services 163 includes the process by which a user or customer obtains access to his or her ISA for maintenance of information stored in the account, including the password, address book, shipping preferences, payment methods, etc. Member services is described below with reference to FIG. 8.

Member profile 264 includes the process by which a user or customer views and changes their member profile.

Member profile is described below with reference to FIG. 9.

Shipping preferences 272 includes the process by which a user or customer views and changes his or her shipping preferences. Shipping preferences is described in below with reference to FIG. 10.
Payment method 278 includes the process by which a user or customer sets up a preferred or default payment method. Payment method is described in greater detail below with regard to FIG. 11.

Change password 284 includes the process by which a user or customer changes his or her password for obtaining access to member services and related account administration functions. Change password is described below with reference to FIG. 12.

Address book 290 includes the process by which a user or customer adds or changes an entry in his or her address book of intended recipients. Address book is described below with reference to FIG. 13.

Cancel membership 296 includes the process by which a user or customer cancels his or her ISA. Cancel membership is described below with reference to FIG. 14.

Shipping 171 includes the process by which a user or customer ships a package using the **Internet** -accessible functions. Shipping is described detail below with to FIG. 15.

The shipping process occurs after a valid login.
Here, the service options or accessories are selected, the
billing/payment method is selected, and PLD inforination is routed to the
mainframe computer 74 (FIG. 2). For the purpose of this description the
term "accessories" generally refers to optionals added to standard
shipping including but not limited to declared value, signature
requirements, E-mail notification, and special handling instructions.

Rate and validate 610 includes the process by which the ISS receives and
processes information from the relevant database to validate shipping
addresses and calculate payment for the selected package type and
shipping service.

Rate and Validate is described below with reference to FIG. 23.

Shipment summary 460 includes the process by which a user or customer
views and/or edits information about a shipment about to be ordered and
is informed as to the cost of the shipping service. Shipment summary is
described below with reference to FIG. 16.

Drop-off locator 492 includes the process by which a user or customer
obtains information about possible drop-off locations for depositing of a
package with the SSP. Drop-off locator is described in below with
reference to FIG. 17.

Package pickup 498 includes the process by which a user or customer can
elect pickup of a package by the SSP.

Package pickup is described below with reference to FIG. 18.

Payment 505 includes the process by which a user or customer pays for the
shipping service. Payment is described in greater detail below with
reference to FIG. 19.

Print labels 554 includes the process by which a user or customer prints
a shipping label 25 on the user's printer 28 (FIG. 1), using print
indicia provided by the ISS. Print labels is described below with
reference to FIG. 20.

Shipment finished 570 includes the process by which a user or customer
finishes an order for shipping a package with the ISS. Shipment finished
is described below with reference to FIG. 21.

Shipment history 580 includes the process by which a user or customer
retrieves and views information about prior shipments, including status
information. Shipment history is described below with to FIG. 22.

Tracking 582 includes the process by which the sender 16, the recipient
18, the SSP 14, or a third party may track the location or progress of a
package 12. In a manner familiar to those skilled in the art, package
identification information is captured at various locations within the
SSP's structure. This information is used to identify the last known
location of the specific package at any given time. Each time this
information is captured it is transmitted to the tracking database 62
located on the mainframe 74.

Although not described separately, it should be understood that the
tracking process 582 is operative to retrieve information from a tracking
database 62 (FIG. 1). The tracking database is implemented as a database
maintained within the mainframe computer 74 utilized by the shipping
service provider, which makes PLD information available to the ISS 10 so
that customers may access and view tracking information about their
package shipments. The tracking process generates display screens
somewhat similar to those of FIG. 35 and FIG. 36, except that the
information is specific to a particular package and its status and/or

location within the SSP's system.

Prior to describing the various processes and routines involved with shipping a package, it will be understood that a user or customer must first register with the SSP and establish an ISA. Registration is described below in connection with FIG. 7. A non-registered user registers with the SSP by generally providing identification, payment method, addressee infori-nation and shipping preferences. Thereafter, a registered user can immediately ship a package with the SSP as described in detail below. Until the user cancels their membership, they can ship with the SSP after logging in. A customer is able to modify all user entered data maintained in their ISAP. The ISS 10 will revalidate any modification made to an ISAP data element that requires validation during registration. During the registration process, confidential data such as credit card numbers preferably do not appear on the interface screen in a readable form. User provided registration data elements are preferably transmitted from the user's computer system to the system 10 via a secure communication protocol. In addition, the user interface preferably makes it clear to the user that their data is transmitted to the SSP in an encrypted form to ensure privacy.

Reuistration data elements include, but are not limited to, user 11), password, credit card information, user's name, user's address, user's telephone number, and user's e-mail address. Data elements that require validation include city, state and postal code, credit card account name, credit card number and credit card expiration date. A user's password and credit card number is preferably not stored in any database in their native, human-readable form.

The ISS preferably validates and transmits credit card data to a credit card authorization system 76 (FIG. 2). The major functions of the authorization system include blocking, authorizing, and billing credit card accounts. Credit card blocking includes reserving a dollar amount on a credit card for a soon-to-be-posted credit card bill. Authorizing includes validating that the credit card inforination provided is accurate.

Billing includes the actual transaction that occurs after the transaction has been approved by the user and released.

In a preferred embodiment, the ISS validates the ISA account information from data entered on the package processing screen or from the registration screens. Validation requires that complete account information is entered. If the data entered is not validated by the ISS, the erroneous data may be identified to the user for correction. The user may have multiple attempts to correct the data prior to canceling the transaction.

If the ISA does not allow **Internet** transactions, then a message should be displayed which reveals the ISA is not authorized for **Internet** shipping. It will be understood that the ISA could be enabled and or disabled by either the owner or the SSP. If the account has been disabled, then the ISS preferably alerts the user that a change was made to the account and that it is no longer **Internet** -authorized.

Third party and **freight** collect transactions are governed by existing business rules that are subject to change.

The ISS preferably follows the currently existing rules and does not perform any third party or **freight** collection validation against an internal shipping service provider database. It will be understood that a change to the database may permit a previously prohibited transaction.

HOME PAGE Routine

Turn now to FIG. 5, for a discussion of the manner in which a customer obtains access to the SSP's web site, typically by accessing an **Internet** -accessible HOME page and navigating to appropriate pages for registering

as a customer, logging in to the ISS to ship a package, logging into, or maintain the customer's **Internet** Services Account Profile (ISAP). FIG. illustrates a routine 150 operative to display the SSP's **Internet** YAW HOME page 630 (FIG. 24) and await user input to register, log in as a member to ship a package, or log in as a member to maintain the ISAP.

Starting at step 152, the user typically accesses the SSP's web site by entering the URL of the site (http:Hwww.ups.com in the disclosed embodiment) in the URL entry area of the browser software, causing display of the SSP's HOME page 630 such as shown FIG. 24. The system then awaits user input of selecting buttons.

At decision 154, the system tests to determine whether the user has decided to register as a customer, which would be an expected response for an unregistered prospective customer. If affinnative, the routine 150 branches to step 156 in response to the user selecting on a MEMBER SERVICES button (e.g. 634 in FIG. 24), and the routine branches to the REGISTRATION routine 158, described below with reference to FIG. 7. Otherwise, the routine 150 proceeds to decision 160.

At decision 160, the system tests to determine whether a previously-registered user has decided to log in to member services, for example, when the customer wishes to access and maintain their ISAP to change shipping preferences or payment method, etc. Log in is the process by which a registered user accesses the ISS to ship a package, and permits the user to access the ISS without the need to re-enter profile information. The routine 150 branches to step 162 in response to the user selecting on the MEMBER SERVICES button 634 (FIG. 24), and the routine branches to the MEMBER SERVICES routine 163, described below in connection with FIG. 8 and presents the user with a LOG IN screen FIG. 24.

Otherwise, the routine 150 proceeds to decision 164.

At decision 164, the system tests to determine whether a previously-logged in user has decided to view or edit their member profile ISAP or other profile information. selecff so, the routine 150 branches to step 166 in response to the user selecting the PROFILE button 636 (FIG. 24), and the routine branches to the MEMBER PROFILE routine 264, described below in connection with FIG. 9. Otherwise, the routine 150 proceeds to decision 168.

At decision 168, the system tests to determine whether the user has decided to ship a package. If so, the routine 150 branches to step 170 in response to the user selecting on the SHIP button 632 (FIG. 24), and the routine branches to the SHIPPING routine 171, described below in connection with FIG. 15. Otherwise, the routine 150 proceeds to decision 172.

At decision 172 the system tests to determine whether the user has decided to log out from member services.

If so, the routine 150 branches to step 174 in response to the user selecting on the LOG OUT button 640 (FIG. 24) The user is logged out of the member services area and the routine 150 returns to step 152 to await further user input.

LOG IN Routine
From the HOME page, in response to selecting either the SHIP icon 632 or the LOG IN button 642 from MEMBER SERVICES the ISS 10 is operative to execute a LOGIN routine 180 (FIG. 6) and display LOG IN page or screen 182 as illustrated in FIG. 25. The LOG IN routine 180 is operative to receive a registered user's ID and password and allow access to the ISS for shipping packages and retrieving status information, and to direct a new user to a REGISTRATION page if the user has not yet registered.

Turning now to FIG. 6, there is illustrated a preferred LOGIN routine 180 which starts at step 182 by displaying a LOGIN page, such as that shown in FIG. 25, and then awaits user input. The LOGIN page includes data entry fields for user entry of a member ID 644 and password 646. A pre-registered customer or member user can log in by entering a valid member ID at ID field 644, and a valid password at

PASSWORD field 646. Thereafter, the user selects the LOG IN button 648.

However, if the user has not yet registered, other steps are required. From step 182, step 184 tests whether the user has elected to view member services or benefits, and if so, branches to step 186 to ascertain if the user has selected a button or link (not shown) to learn more about the SSP's or a link to access information about member benefits. If affirmative, the routine branches to the member services routine 163 (FIG. 8), described in detail below.

If at step 184 the user has not decided to view member services, then at decision 190 the system tests whether the user has elected to register as a customer or member. If so, the user selects a register link (not shown) or REGISTER button such as button 650 (FIG. 25), and. branches to step 192. From step 192, the routine branches to a REGISTRATION routine 158 (FIG. 7), described in detail below.
If at decision 190 the user does not need or elect to register, the routine proceeds to step 196 to receive user input of member ID and password in the respective fields, and await selecting of the LOG IN button 648. In response to selecting the LOG IN button 648, at step 198 the system retrieves the users ID and password for validation. At decision 200 the system deten-nines if the user arrived at the LOG IN screen 182 by selecting the SHIP icon 632 from the SSP's home page. If so, the ISS directs the user to the SHIPPING routine 171 described below with regard to FIG. 15. If not, the system directs the user to the IS S HOME PAGE routine 150 described above with reference to FIG. 5.

As one skilled in the art understands, which page a user returns to is a design choice.

Where an non-registered user has inadvertently found their way to the LOG IN screen 182, the ISS provides the opportunity to register by selecting a REGISTER button 650 (FIG. 25). Selecting this button will direct the user to the REGISTRATION routine 158 described below with reference to FIG. 7.

If the ISS determines the user did select the SHIP icon 632 from the SSP's home page, the ISS authenticates a user's access to their ISA. Once authenticated, the ISS permits a user to perform any of these shipping related functions described herein. In a preferred embodiment customers are not required to re-access the ISS if they change URLs or perform other unrelated shipping tasks within a predefined time period.

From the LOGIN page 182 the user ma)
Member Services benefits by selecting the t:;, SERVICES button 634. In response the ISS will direc to the MEMBER SERVICES routine 163 described b reference to FIG. 8.

REGISTRATION Routine
Turn now to FIG. 7 for a discussion of a routine 158 of a preferred embodiment for member registration.

Registration is the process that each non-registered user initiates to establish an **Internet** Services Account Profile (ISAP). In a preferred embodiment, a customer establishes an ISAP before being allowed to ship a package. Pertinent data such as location, shipping preferences, and default biHing information is entered by the non-registered user to create the ISAP.

In response to invoking, the REGISTRATION routine 158, the system displays a REGISTRATION screen or page (not shown) at step 210. Although not shown in the figures, the REGISTRATION screen prompts the registering user to respond to certain queries by providing infon-nation such.as, but not limited to, the user's name, their title and company name if applicable, their address including city, state/province and postal. code, and the country of origin. Further, the registering user provides telephone numbers, an e-mail address, and may choose whether to be informed of updates and enhancements to the ISS. It will be understood that such information may be input through a data entry device in communication with the computer 20 or selected from pull down .screens.

After the registering user provides the information requested, at step 212 they verify that all required fields are correctly filled-in. At decision step 214, the registering user can decide whether to view a privacy policy (or other agreements) by selecting an AGREEMENTS button (not shown) at step 216.

In response, the system will display the information about the user agreement and privacy policy for the registering user to view.

At decision step 218, the registering user can decide whether to cancel or proceed with registration. If at decision 218 the user decides to cancel out of registration, they select the CANCEL button (not shown) at step 220. In response, the ISS determines if this party was previously registered. If this user was not previously registered, at step 222 the user is returned to the HOME PAGE routine 150 and display of the SSP's home page. If the ISS determines the person was previously registered, the ISS branches to routine 163 and displays the SSP's MEMBER SERVICES screen described below in detail with reference to FIG. 8.

If at decision 218 the user chooses to continue the registration process, the user selects a REGISTER button (not shown) at step 226 to access a REGISTRATIONIMEMBER INFORMATION screen (not shown), and the process branches to routine 228 to establish a member ID and password, and receive the user's acceptance of registration. At step 230, the system displays a REGISTRATION/MEMBER INFORMATION screen (not shown). Although not shown, the REGISTRATION/MEMBER INFORMATION screen initially prompts a user to enter an ID and a password, to reenter the password, to select a verification question from a drop-down list.

and finally to enter a verification response.

After registration is complete and when the user returns to conduct a transaction, the user will only be prompted to enter the member ID and password on a LOG IN screen such as shown at 182 in FIG. 25.

Still referrinc, to FIG. 7 at step 232 the user decides whether to accept the provided information for registration. If the user decides to reject any of the input information, or declines to register, the user selects a REJECT button (not shown) on the screen at step 234. In response, the system determines if the registering user was previously registered at MEMBER SERVICES. If this user was not previously registered, the ISS returns the user back to the HOME PAGE routine 150 (FIG. 5) and display of the SSP's home page (FIG.

24). If the ISS determines that this user-was previously registered, the system directs them to a member services routine 163 and display of a MEMBER SERVICES screen described below with reference to FIG. 8. If the registering user chooses to continue the registration process, the user activates an ACCEPT button (not shown) on the screen at step 236. In response, the system displays a REGISTRATION/THANKYOU screen (not illustrated) at step 238.

Although not shown, the REGISTRATION/THANKYOU screen includes a LOG IN button which the user may

select at step 240 in order to login to the ISS. In response, the system displays the MEMBER SERVICES LOG IN screen described with reference to FIG. 25 and executes the LOGIN routine 180 (FIG. 6).

Upon completion of the registration process described in connection with FIG. 7, the registered user will have established an ISAP and be enabled to ship packages through the SSP in accordance with other processes described herein.

MEMBER SERVICES Routine
Turn now to FIG. 8 for a discussion of the MEMBER SERVICES routine 163. If during the registration process (FIG. 7) the system determines the registering user was previously at MEMBER SERVICES and has already registered, the ISS wiH direct the user to a MEMBER SERVICES screen (not shown). At step 250, the ISS determines if the registering user is already logged in. Finding that they are not, the ISS branches to step 252 where it displays a MEMBER SERVICES screen for non-registered users (not shown). As explained above with regard to the registration process, a registering user may choose to view a privacy policy or other agreements prior to deciding to register. If the user decides to register, they select on a third REGISTER button (not shown) at step 254 and are directed to the REGISTRATION routine 158 described above with reference to FIG. 7. If a non-registered user declines to register they can return to the previous page by selecting the browser BACK button located on the browser tool bar.

Referring back to step 250, if during the registration process the system determines the registering user is already logged in, the system directs the user to a MEMBER SERVICES screen (not shown) for logged in users at step 256.

At step 258, the already registered user may elect to view a privacy policy or other agreements in the manner described, or be directed to other member service functions.

In the event that the user decides not to view the agreements or privacy policy, the routine 163 continues to a sequence of steps 260, 268, 274, 280, 286, 292 where the system responds to the user's selecting of buttons on the MEMBER SERVICES page (not shown) for viewing the member profile, viewing the shipping preferences, viewing the payment method, changing the password, working with the 4:5 z:1 address book, and canceling membership, respectively. The system responds to a button select by branching to and executing an appropriate routine for the indicated function, as will be described in greater detail below. Referring now to FIG. 8B, to view his or her MEMBER PROFILE, the system tests at step 260 whether the user selected a MEMBER PROFILE button (not shown) and if affirmative, at step 262 the user is directed to a MEMBER PROFILE routine 264 best described with reference to FIG. 9.

To view the SHIPPING PREFERENCES, the
system tests at step 268 whether the user selected a SHIPPING PREFERENCES button (not shown) and if they did, at step 270 the user is directed to a SHIPPING PREFERENCES routine 272 best described with reference to FIG. 10.

To view and set up a payment method, the system tests at step 274 whether the user selected a PAYMENT METHOD button (not shown) and if they did, at step 276 the user is directed to a PAYMENT METHOD routine 278 best described with reference to FIG. 11.

To change a password, the system tests at step 280 whether the user selected a CHANGE PASSWORD button (not shown) and if they did, at step 282 the user is directed to a CHANGE PASSWORD routine 284 best described with reference to FIG. 12.

To work with the ADDRESS BOOK, the system tests at step 286 whether the

user selected an ADDRESS BOOK button (not shown) and if they did, at step 288 the user is directed to an ADDRESS BOOK routine 290 best described with reference to FIG. 13.

To cancel the membership, the system tests at step 292 whether the user selected a CANCEL MEMBERSHIP button (not shown) and if so, at step 294 the user is directed to a CANCEL MEMBERSHIP routine 296 best described with reference to FIG. 14.

In the event that the user did not select any of the various member services buttons described above, but instead selects the browser's back button at step 298, the system displays a previous page in the known manner.

MEMBER PROFILE Routine
Referring now to FIG. 9, in response to selecting the MEMBER PROFILE button (not shown) from either the HOME PAGE or MEMBER SERVICES screen, the ISS 10 executes routine 264 to provide for member services and editing of the user's **Internet** Service Account. Starting at step 300, the system displays a MEMBER PROFILE page or screen (not shown), including the user s information from registration or the last update, and awaits the user's input.
The remainder of the steps shown in FIG. 9 are self-explanatory and will not be discussed further herein, except as follows: the steps of the routine 264 are operative to receive the user's input and determine whether the user has decided to return to a previous page, select certain other member options displayed in a parallel navigation menu on the MEMBER SERVICES screen, make changes to the shipment origin information, cancel the changes, or update the changes. After making changes the user may cancel by selecting a CANCEL button (not shown), or the user may confirm the changes by selecting an UPDATE button (not shown). Either decision returns the user to the step 300 to receive further user input.

it will be understood that information entered by the member is stored in the customer profile database 58, and used to determined customer preferences for payment method (e.c-1;., which credit card of plural types, customer account number), shipping method, method of accessing the shipping service provider (e.g. pick up at a predetermined day of week and time at certain place, vs. drop off), package type, etc. The member profile screen, although not shown, preferably includes data fields for receiving customer input of these and other customer preferences, which are stored in the customer profile database in association with information identifying the particular customer (e.g. name and password). In particular, and in accordance with the invention. information entered in the SHIPPING PREFERENCES routine, PAYMENT METHOD routine, and ADDRESS BOOK routine described below are stored in this database.

SHIPPING PREFERENCES Routine
Referring now to FIG. 10, in response to selecting the SHIPPING PREFERENCES button (not shown) from either the HOME PAGE or MEMBER SERVICES screen, the ISS 10 executes routine 272 to provide for selection and/or editing of the user's shipping preferences, for example, service type, package type, pick up times, and other parameters related to shipping of packages. Starting at step 310, the system displays a SHIPPING PREFERENCES page (not shown) that includes a set of default shipping preferences, and awaits the user's input.

The remainder of the steps shown in FIG. 10 are self-explanatory and will not be discussed further herein, except as follows: the steps of routine 272 are operative to receive the user's input and determine whether the user has decided to return to a previous page, select certain other member options displayed in a parallel navigation menu on the MEMBER SERVICES screen, set or make changes to the shipping preferences, set and/or verify service type from a drop-down list, set and/or verify package type from a drop-down list, set and/or verify a SHIPPING START page from a drop-down list, verify shipment history, set and/or verify a

shipment ready time or set a new time, set and/or verify a pick up time, cancel changes, or update the changes. After making changes to the Shipping Preferences the user may cancel by selecting the CANCEL button (not shown), or the user may confirm by selecting the UPDATE button (not shown). Either decision returns the user to the step 310 via connection A to receive further user input.

PAYMENT METHOD Routine
Referring now to FIG. 11, in response to selecting the PAYMENT METHOD button (not shown) from either the HOME PAGE or MEMBER SERVICES screen, the ISS 10 executes routine 278 to provide for user selection of a method for payment of the shipping services. Starting at step 312, the system displays a PAYMENT METHOD page or screen (not shown) with default payment information selected, typically payment via a credit card, and awaits the user's input. Many of the steps shown in FIG. 11 are self-explanatory and will not be discussed further herein, except as follows: the steps of the routine 278 are operative to receive the user's input and determine whether the user has decided to return to a previous page, select certain other member options displayed in a parallel navigation menu on the MEMBER SERVICES screen, and receive and verify the user's input and confirmation of a credit card type, credit card number, and expiration date. And while FIG. 11 illustrates payment by credit card, a SSP account or other acceptable form of payment may be referenced.

At step 314 the system receives user input of a credit card type, a credit card number, and expiration date. At step 316, the ISS utilizes its connection to the credit card authorization system 76 (FIG. 2) to verify the credit card number and expiration date, and determine whether the user has available credit.

If at decision 318 the credit card authorization system indicates that the provided credit card is invalid or has insufficient credit, the routine branches to step 320 and displays a message that the credit card was not accepted. The routine then returns the user to step 312 where the user enters another credit card or exit may from the routine.

If at decision 318 the credit card authorization system indicates that the provided credit card is acceptable, the routine branches to step 322, where a message "card accepted" is displayed, and the routine exits by returning to the MEMBER SERVICES routine 163 (FIG. 8).

CHANGE PASSWORD Routine
Referring now to FIG. 12, in response to selecting the CHANGE PASSWORD button (not shown) from either the HOME PAGE or MEMBER SERVICES screen, the ISS 10 executes routine 284 to allow the user to change his or her password for obtaining access to their member profile (ISAP) and/or account (ISA). Starting at step 330, the system displays a change password page (not shown) and awaits the user's input.

The remainder of the steps shown in FIG. 12 are self explanatory and will not be discussed further herein, except as follows: the steps of routine 284 are operative to receive the user's input and determine whether the user has decided to return to a previous page, select certain other member options displayed in a parallel navigation menu on the MEMBER SERVICES screen, or enter and re-enter a new password for verification.

After changing the password, the user may cancel by selecting the CANCEL button (not shown), or the user may confirm by selecting the UPDATE button (not shown). Where the user has changed the password, the disclosed system displays a message stating that the password was updated and that the user will receive an e-mail confirming that the password was changed. Either decision returns the user to the step 330 via connection B to receive further user input.

ADDRESS BOOK Routine
Referring now to FIG. 13, in response to selecting L the ADDRESS BOOK

button (not shown) from either the HOME PAGE or MEMBER SERVICES screen, the ISS 10 executes routine 290 to allow the user to view and/or change prestored addresses of intended recipients in an address book stored in the system on behalf of the user. Starting at step 332 the system displays an ADDRESS BOOK page (not shown), containing a list of the user's entries in his or her address book, and awaits the user's input. The remainder of the steps shown in FIG. 13 are self-explanatory and will not be discussed further herein, except as follows: the steps of routine 290 are operative to receive the user's input and determine whether the user has decided to return to a previous page, select certain other member options displayed in a parallel navigation menu on the MEMBER SERVICES screen. add a new address to the address book, or change an existing address in the address book or delete an existinc, address in the address book. Some of the information the user may change includes but is not limited to names, titles, company names, addresses, including Zn state/province, country, and zip code.

After adding or changing an address. the user may cancel by selecting the CANCEL button (not shown), or the user may confirm by selecting the UPDATE button (not shown).

Either decision returns the user to the step 332 via connection D to receive further user input.

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CANCEL MEMBERSHIP Routine
Referring now to FIG. 14, in response to selecting the CANCEL MEMBERSHIP button (not shown) from either the HOME PAGE or MEMBER SERVICES screen, the ISS 10 executes routine 296 to allow the user to cancel his or her membership. Starting at step 334 the system displays a CANCEL MEMBERSHIP page or screen (not shown), and awaits user input. The remainder of the steps shown in FIG. 14 are self-explanatory and will not be discussed further herein, except as follows: the steps of routine 296 are operative to receive the user's input and determine whether the user has decided to return to a previous page. select certain other member options displayed in a parallel navigation menu on the MEMBER SERVICES screen, or cancel membership.

After selecting the option to cancel membership, the user may "cancel the cancel" operation by selecting the CANCEL button (not shown), or the user may confirm the cancel operation by selecting the UPDATE button (not shown).
A decision to cancel the operation returns the user to the step 334 to receive further user input. A decision to confirm the cancel operation, on the other hand, results in deletion of the user's registration information, which is preferably confirmed with an "are you sure?" message before the deletion is committed to the database. For the user who selects the CONFIRM button at step 336, the system displays a message stating the user will receive an e-mail confirming cancellation.

Thereafter, selecting a CONTINUE button (not shown) returns the user to the service provider's home page (FIG. 24) and execution of HOME PAGE routine 150 (FIG. 5). Further access to the ISS will require re-registration by the customer.

Assumine, that a customer has duly registered and established an **Internet** Services Account (ISA) with the SSP 10, the customer can proceed to ship a package. Routines carried out in the preferred embodiment of the present invention for package shipping will be discussed next. It is assumed that a user has logged in via a log in process such as process 180 described in connection with FIG. 6, prior to being permitted to ship a package.

SHIPPING Routine
Turn now to FIG. 15 for a discussion of the shipping process 171 and the

manner in which a registered and logged in user ships a package in accordance with the methods of the present invention. It will be recalled from the discussion above in connection with FIG. 6 that, in response to selecting the LOG IN button 648 shown in FIG. 25, the system 10 executes the shipping process 171.

Starting with FIG. 15A at step 340, the system 10 displays a SHIPPING INFORMATION page or screen 660, best shown in FIG. 26 and awaits user input. From the SHIPPING INFORMATION screen 660 the user begins the shipping process. Various control buttons are available to the user on the screen 660, including a LOG OUT button 670 to allow the user to leave a shipping session, a PROFILE button 672 to allow the user to access their prestored member proffle, and a MEMBER SERVICES button 674 to allow the user to access member service.

At decision 342 the system tests whether the user has decided to view the shipping history, track a shipment, use a similar shipment to process a new one, void a shipment, reprint a receipt, or reprint a label. Appropriate processes for viewing shipping history, tracking, reprinting receipts or labels, etc. are invoked from the SHIPPING HISTORY page. By selecting the SHIPPING HISTORY button 662, the routine branches to step 344 where it will display a SHIPPING HISTORY screen as shown and described in connection with FIG. 35. If the user does not elect to view the shipping history, the process 171 proceeds to decision 348.

At decision 348 the system tests whether the user has elected to view or edit their profile information, work with the address book, set or change shipping or payment preferences, change a password, or cancel their membership by selecting the PROFILE button 672. In response the ISS will branch to step 350 and the MEMBER SERVICES routine 163, described in connection with FIG. 8. The customer/member thus leaves the shipping function and attends to account management functions. If the user does not elect to leave the shipping process the process 171 proceeds to decision 352.

At decision 352 the system tests whether the user has elected to view the help function on shipping information, for example when the user needs further information about the shipping process or the SSP's policies and procedures of the shipping service provider. If the user selects a HELP button 676 from the SHIP menu bar, the process branches to step 354 and the system displays appropriate shipping information help, which is not described further herein but is well known to those skilled in the art. If the user does not elect to view shipping information help, the process 171 proceeds to decision 356.

Like the shipping history and help tabs described above, those skilled in the art are aware that it is merely a design choice whether to add preference tabs (not shown), support tabs (not shown) or other tabs related to the functionality of the website or the shipping of packages through the SSP.

At decision 356 the system tests whether the user has decided to loc, out of **Internet** shipping. If they did, the process 171 branches to step 358 and the user is returned to the SSP's HOME PAGE routine 150 (FIG. 5) which displays the home page (FIG. 24).

At decision 356, if the user decides to proceed with processing a new shipment, the routine 171 proceeds to decision 360 illustrated in FIG. 15B. There the system tests whether the user has decided to get "ship to" information, such as the name and address of an intended recipient, from the user's address book. Referring in this regard to FIG. 26, this can be effected by the user selecting a relevant recipient from a nickname dropdown list "select one" 678 and selecting, a RETRIEVE ADDRESS button 680. In response, at step 368 the system fills in or populates the SHIP TO information fields in FIG. 26 with address information from the selected recipient, and the process branches to step 370.

Step 370 may also be reached if at decision 360 the user does not elect to obtain "ship to" information from the nickname list. At step 370 and a series of subsequent steps, the user then verifies (or in the event the shipping information is direct entry, the user enters) various items of information in a series of "ship to" information fields on the SHIPPING

INFORMATION page 660. In a preferred embodiment, these fields include a company or name field 682, a contact name field

684, street address fields 686, the city, state/province and postal code fields 688, and a country and/or province field 690. The user also enters or verifies telephone and extension numbers in a field 692. The user selects that this is residential information if applicable at checkbox 694, and the user selects whether to add the information to his or her address book at checkbox 696.

After completing the entry of the "ship to" information, at step 372 the system verifies that the required fields, those critical to successful delivery and shown in bold in
FIG. 26, are filled in correctly. If not, the user is notified by display of an appropriate error message. Upon verification that all required fields are filled in correctly, the system branches to step 380, illustrated in FIG. 15C where the user verifies "ship from" information.

At step 380 the user scrolls the SHIPPING INFORMATION page 660 to review the SHIP FROM information fields, e.g. Origin Address and Return Address. At decision 382, the user determines if the Origin Address is correct. If any information in the origin address needs to be edited, the user selects the EDIT button 700 associated with the origin address at step 384. In response the system directs the user to an EDIT ORIGIN ADDRESS screen (not shown) where the user can make the necessary changes. If no edits are required, the process proceeds to decision 386.

At decision 386, the user deten-nines if the Return Address is correct. If any information in the Return Address needs to be edited, the user selects a second EDIT button 702 associated with the Return Address at step 388. In response the system directs the user to an EDIT RETURN ADDRESS screen (not shown) where the user can make the necessary changes.

The user then selects on UPDATE button (not shown) which amends the address information according to the user's edits.
In a manner well known to those skilled in the art, the system displays EDIT ORIGIN ADDRESS and EDIT RETURN ADDRESS screens that permit the user to make any changes necessary to the sender's origin address and return addresses. It will be appreciated that these addresses can be the same, or can be different, for example if the user employs an Internet browser from a remote location unaffiliated with his or her regular place of business (Origin Address) to ship a package.

This situation may to occur when a travelling businessperson designates a hotel as a Return Address during a business trip if they wish the package returned to the hotel rather than their usual place of business.

After verifying and/or editing the Origin Address and Return Address, the process 171 proceeds to step 390 as shown in FIG. 15D. At step 390, the user scrolls the SHIPPING INFORMATION page 660 if necessary and selects appropriate shipping service details for the present shipment.

The user detennines if a correct service type is filled in at decision 392, and if not the routine branches to step 394, where the user selects the appropriate service types from a dropdown list 704 in FIG. 26. As shown in FIG. 26, some illustrative service types may include Next Day Air, Next Day Air Saver, 2d Day Air A.M., 2d Day Air, Worldwide Express Letter, and the like. After receipt of the selected service type from the user, the process branches to decision 396.

At decision 396, the system tests whether the user has selected a special package shipping option, for example, **Saturday   delivery** . If **Saturday delivery** is desired, the user can select a **Saturday   Delivery** checkbox 706 (FIG. 26) at step 398.

At some point in the process, a customer must choose an access method for tendering the package to the SSP.

Valid access methods include tender to an SSP representative, tender "over the counter" at a place of business operated by the SSP or an agent of the SSP, tender to an unmanned drop-off location, or request On-Demand Service (ODS), also referred to as On Call Air Pickup.

At decision 400, the system tests whether the user has selected the package pickup option. If package pick-up is desired the user can select a REQUEST PACKAGE PICKUP checkbox 708 at step 402. After all special options are selected, the routine 171 proceeds to step 410 illustrated in FIG. 15E.
At step 410 the user may scroll if necessary to review package details, also shown in FIG. 26, for example package type, weight, dimensions, insurance, reference number, etc. At decision 412, the system tests whether the user has filled in or selected an appropriate package type. At step 414, the user selects a package type which accurately describes the present shipment from a dropdown list 710 in FIG. 26.

At decision 416, the system tests whether the user has determined if the package is a letter or whether a package weight should be provided. If the present shipment is not a letter envelope, at step 418 the user enters the package weight in the data field 712 illustrated in FIG. 26.

At decision 420 the system tests whether the package is a customer-supplied package, and if it is requires entry of package dimensions. At step 422 the user enters the length, width and height in the relevant data windows 714 illustrated in FIG. 26.

At decision 424, the system tests whether the user wishes to declare a package value in excess of a predetermined amount, e.g. $100. At step 426, if the user wants to declare value over a predetermined mimimum, the user enters the declared value of the shipment in data field 716 illustrated in
FIG. 26.

At decisions 428 and 432, the system tests whether the user wishes to supply a package reference number. At steps 430 and 434, if the user wants to supply one or more package reference numbers or other text, the user may supply package reference numeral or text for association with the package and future reference in package reference data fields 718, 720 respectively, illustrated in FIG. 26.

It will be understood by those skilled in the art, that the embodiments described regarding national delivery and that international deliveries may require additional steps or data fields to accommodate the requirements of international delivery.

After these steps, the SHIPPING routine 171 proceeds to step 440 illustrated in FIG. 15F. The user proceeds with the package shipping process by selecting the CONTINUE button 722 on the SHIPPING INFORMATION page 660. In response, the system is operative to validate whether the correct Ship To and Ship From postal codes were entered, by reference to a prestored database of valid postal codes, and to calculate the appropriate charge for the shipping service. In the disclosed embodiment, the validation is effected by a RATE AND VALIDATE routine 610, which is described in connection with FIG. 23. The routine 610 returns with information indicating that the postal code are valid and delivery can be effected by the shipping service provider, as well as the monetary

charges for shipping the package that is to be charged to the customer's account or credit card. It will be understood by those skilled in the art that city/state or similar information may be used to rate the shipping costs.

At decision 444, the system tests to determine whether the rate and validate routine 610 has indicated an error.

If there are any errors or omitted information, the system displays an error message "Postal Code Not Valid" at step 446 and directs the user back to step 370.

If at decision 444 the postal code has been validated by the system, the process proceeds to decision 448. At this step, the system tests whether the user has requested package pickup. It will be recalled from the discussion above that package pickup can be indicated for a package by the user's selection of the REQUEST PACKAGE PICKUP check box 708 illustrated in FIG. 26. If affmnative, the system directs the user to an ON CALL AIR PICKUP page or screen shown in FIG. 29, and the process br anches to a PACKAGE PICKUP routine 498, as described in connection with FIG. 18.

If at decision 448 the system determines the user has not requested package pickup, the routine branches to a SHIPMENT SUMMARY routine 460, where the user can view a summary of the information about the shipment on a

SHIPMENT SUMMARY screen as illustrated in FIG. 27, take other actions, and continue the package shipment process. The SHIPMENT SUMMARY routine 460 is described with reference to FIG. 16.

SHIPMENT SUMMARY Routine

Turn now to FIG. 16 for a discussion of the SHIPMENT SUMMARY routine 460, which should be read in conjunction with the SHIPMENT SUMMARY page 724 shown in FIG. 27. Starting at step 462 the system displays the SHIPMENT SUMMARY page 724 and awaits user input. The

SHIPMENT SUMMARY page contains information summarizing the current status of the shipment of packages in process by the customer, prior to closing out the shipment. This page allows the customer to edit or change information about the shipment, add a new package, select or change parameters about on call or demand pickup, or continue with the shipping process. The page includes a TOTAL CHARGES information display region 734 for display of the total charges for the shipment, as such total charges have been calculated by a Rating & Validation Engine (RAVE) during the validation process of z:1 FIG. 23.

At decision 464 the system tests whether the user has decided to edit the "ship to" address on the current order.

This would be indicated by the user's selection of an "Edit" link 726 in FIG. 27. If affirmative, the process branches to step 466 where the system locates the "ship to" address information and fills it in on the SHIPPING INFORMATION page of FIG. 26, in preparation for display of the information in editable form for the customer. The routine then branches or returns to the SHIPPING routine, FIG. 15. Otherwise, the process proceeds to decision 468.

At decision 468, the system tests whether the user has decided to edit the shipment origin address on the current order. This would be indicated by the user's selection of an "Edit" link 728 in FIG. 27. If so, the process branches to step 470, where the system locates the shipment origin address information and fills it in on the SHIPPING INFORMATION page of FIG. 26, in preparation for display of the information in editable form for the customer. The routine then branches or returns to

the SHIPPING routine, FIG. 15. Otherwise, the process proceeds to decision 472.

At decision 472 the system tests whether the user has decided to edit the return address on the current order. This would be indicated by the user's selection of an "Edit" link 732 in FIG. 27. If affirmative, the process branches to step 474 where the system locates the return address information and fins it in on the SHIPPING INFORMATION page of FIG. 26, in preparation for display of the information in editable form for the customer. The routine then branches or returns to the SHIPPING routine, FIG. 15. Otherwise, the process proceeds to decision 480.

At decision 480, the system tests whether the user has decided to edit the service type requested for the current order. This would be indicated by the user's selection of an "Edit" link 732 in FIG. 27. If affiri-native, the process branches to step 482 where the system locates the selected service type information and fills it in on the SHIPPING INFORMATION page of FIG. 26, in preparation for display of the information in editable form for the customer. The routine then branches or returns to the SHIPPING routine, FIG. 15. Otherwise, the process proceeds to decision 484.

At decision 484 the system tests whether the user has decided to edit any package details for the current order. If so, the process branches to step 486, where the system locates the selected package detail information, e.g. package type, weight, dimensions, declared value, etc. and fills it in on the SHIPPING INFORMATION page of FIG. 26, in preparation for display of the information in editable form for the customer.

The routine then branches or returns to the SHIPPING routine, FIG. 15. Otherwise, the process proceeds to decision 488.

At decision 488 the system tests whether the user has decided to view the drop off locator, perhaps in anticipation of dropping off the package for acquisition by the SSP, as opposed to on demand pickup. If affirmative, the process branches to step 490, where the system displays the DROP-OFF LOCATOR page, as shown in FIG. 28. The routine then branches to a DROP OFF routine, as described in connection with FIG. 17. Otherwise, the process proceeds to decision 494.
At decision 494 the system tests whether the user has decided to schedule, or perhaps reschedule, dates and times for on demand pickup. If affirmative, the process branches to step 496 where the system displays the ON CALL AIR PICKUP page, as shown in FIG. 29. The routine then branches to a PACKAGE PICKUP routine, as described in connection with FIG. 18. Otherwise, the process proceeds to decision 500.

At decision 500 the system tests whether the user has decided to add a new package to the current shipment by selecting an ADD A PACKAGE button 742 illustrated in FIG. 27. If affirmative, the process branches to step 502 where the system displays a new SHIPPING INFORMATION page as in FIG. 26, and branches to the SHIPPING routine FIG. 15.

Otherwise, the process proceeds to decision 504.

At decision 504 the system tests whether the user has decided to complete the process by selecting the CONTINUE button 744 in FIG. 27. If affirmative, the process branches to the next stage in the process of package shipping and completion, namely, a PAYMENT INFORMATION routine FIG. 19.

DROP-OFF LOCATOR Routine
Turn now to FIG. 17 for a discussion of the DROP OFF LOCATOR routine 492, which should be read in conjunction with the DROP-OFF LOCATOR page 746 shown in FIG. 28. Starting at step 510 the system displays the DROP OFF LOCATOR page 746 and awaits user input. The DROP OFF LOCATOR page

utilizes the customer's current origin address (or another address, which can be entered by the customer by invoking a command, not illustrated), and determines one or more nearby drop-off locations at which the customer can deposit the package or packages for acquisition by the shipping service provider. These nearby locations are preferably displayed on a map that shows the current customer location with a "YOU ARE HERE" label 748, with one or more nearby locations for drop-off, e.g. locations 750a, 750b, 750c, etc. These locations are also preferably listed in an address region 752 so that the user can determine the location's address, location type, times of operation, telephone number, and distance.

At subsequent step 512, the user may select an exit option, for example, the browser's known BACK button or a CONTINUE button 754 or another appropriate control button.

The system then returns to an ORIGINATING page (if the BACK button is selected) or branches to a selected function.
PACKAGE PICKUP Routine
Turn now to FIG. 18 for a discussion of the PACKAGE PICKUP routine 498, which should be read in conj. h FIG. 29 and which illustrates the ON CALL juncton wit AIR PICKUP page 760. This routine effects a demand for pickup of a package, also called a request for -On -Dernand Service (ODS).

In the disclosed preferred embodiment, an ODS request is directed to ODS system 34 (FIG. 3), which is implemented with information stored in an ODS database 36.

The ODS database immediately performs a look-up service for the area information and determines the service area and location time selected by the user. If the selected time and date for the pick-up is available, the ODS system validates the pick-up request and sends a confirming message back to an application server that initiated the ODS request. The confirmation is immediately forwarded to the user who continues with the shipment process.

However, if the time and date selected by the user is not available, the ODS responds by providing alternative pickup information, for example the nearest five optional times and dates available for pick-up. The user may then select from the alternative pick-up times. Once the user has confirmed the time and date available, the ODS system validates the pick-up infon-nation and rates the shipment with the RAVE function 64, as described below.

If the selected time is rapidly approaching and if there is an available driver close to the user, then the preferred system delivers a message to the vehicle driver via a Delivery Information Acquisition Device (DIAD) 40. The message delivered to the driver directs them to the user at the date, time, and location selected by the user for the ODS pick-up request.

Alternatively, if after searching the ODS dispatch system it is determined that there are no readily available drivers close to the user at the time and date of the ODS request pick-up, the ODS request is delivered to a message center (not shown) where the ODS request is routed to the next available driver scheduled to be at or near the user at the requested time and date of pick-up.

Starting in FIG. 18 at step 520, the system displays the ON CALL AIR PICKUP page 760 (FIG. 29), which includes data fields for receiving user input of scheduling information, for example pickup location 762, pickup date 764, a shipment ready time 766, and a pick up by time 768. The user enters desired information in the fields at step 522 by data entry or use of drop-down menus. When the user is satisfied with the scheduling information entered, the user selects the CONTINUE button 770, which takes the routine to step 524. In response to the CONTINUE button, at

decision 526 the system determines whether the entered information is valid, for example, by determining if the user's pickup location postal code entered into the pickup location field 762 is within the SSP's service area, or whether the dates and times entered into the corresponding fields are within the SSP's predetermined service dates and times.

If the system cannot validate the scheduling information, the process branches to step 528, where the system displays a message indicating that the scheduling data is invalid, and the routine branches back to step 520 for entry of other information. It will be understood that the user can exit from this page by other appropriate commands, e.g. the browser's BACK button, etc. If at decision 526 the pickup data is deemed valid, the scheduling information is accepted by the system and the routine branches to the SHIPMENT SUMMARY routine 460, described in connection with FIG. 16 and FIG. 27. It will be understood that the user can proceed from there to add a package, or continue with the shipping process.
PAYMENT Routine
Turn now to FIG. 19 for a discussion of the PAYMENT routine 505, which should be read in conjunction with FIG. 30 and FIG. 31, which illustrate a PAYMENT INFORMATION page 780 and a CONFIRM PAYMENT page 804, respectively.

Starting at step 530, the system retrieves default payment method credit card and any account number associated with the customer. At step 532 the system displays a PAYMENT INFORMATION page 780, which includes radio buttons, check boxes, and data fields for receiving payment information from the customer, and awaits user input. For example, in the disclosed embodiment the payment information data entry includes mutually exclusive radio buttons 782a, 782b, 782c for allowing user selection of a credit card on file, another credit card, and a user's existina account with the shipping service provider, respectively.

In the case of a credit card on file, the system utilizes the default credit card information provided by the customer during registration, which is stored in the customer's **Internet** Services Account Profile (ISAP) file. Selected information about the default credit card is displayed to the user in realon 784.
At decision 536 the system tests whether the user has selected the "PAY USING ANOTHER CREDIT CARD" RADIO button 782b. If not, the routine branches to step 542 to await selection of an exit method. In the case of another credit card, data entry fields 786 for receiving entry of card type, card number, and expiration date are activated. A check box 788 is provided so that the user can make the credit card the new default credit card from now on. The system validates the provided new credit card information at step 538. If the new credit card information can be validated, the routine branches to step 542 to await selection of an exit method. If the information cannot be validate, at step 540 the system displays a message indicating the card is not validated or a message noting why the card is rejected, and returns control to step 534 to await selection of another payment method.

In the case of a payment using an existing SSP account, the system utilizes an account number, which is stored in the customer's ISAP.

Once appropriate payment information for the shipment is entered, at step 542 the user can select a CONTINUE button 790 or a CANCEL button 792. The CANCEL button causes the current operation to be aborted, and control may be returned to a previous page or handled otherwise, as the customer has elected not to proceed with the payment method selection.
If at step 542 the CONTINUE button is selected, the system further validates the provided payment information, and branches to step 550 if the payment information is validated.

At step 550, the system displays the CONFIRM PAYMENTS page 804, as shown in FIG. 31. This page contains various terms and conditions of the

shipment by the SSP, which can be provided via links to other pages containing text (not shown) in the known manner or directly on the page Information about the selected payment method is presented in a display area 794 and payment amount is presented in a display area 796. This page also contains an "I ACCEPT" button 800 for receiving customer acceptance of the payment method, payment amount, and terms and conditions, as well as an "I DO NOT ACCEPT" button 802 for receiving customer rejection of the transaction. Also provided is a link 798 to Other Payment Methods, which allows the customer to change the payment method before continuing the transaction.

At decision 552, the system tests whether the user has selected the "I ACCEPT" button 800 or the "I DO NOT ACCEPT" button 802. In the event that the customer has selected the latter, the user is returned to the SHIPMENT SUMMARY page (FIG. 27) and the routine exits. In the event that the customer has selected the former, the process for shipping can continue, and the routine branches to a PRINT LABELS routine, described with reference to FIG. 20.

PRINT LABELS Routine

Turn now to FIG. 20 for a discussion of the print labels routine 554, which should be read in conjunction with FIG. 32 and FIG. 33, which illustrate a PRINT LABELS AND RECEIPT page 806, and a RECEIPT page 818, respectively.

Starting at step 556 the system displays the PRINT LABELS AND RECEIPT page 806 as shown in FIG. 32, and awaits user input. By selecting button 810, the PRINT LABELS AND RECEIPT page 806 provides information about how to print a label 25 on the customer's computer that, in accordance with aspects of the present invention, allows the user to view and print labels, allows the user to view and print a receipt, and allows the user to finish the current shipment At decision 558 the system tests whether the user has elected to view and print a label by selecting a LABEL I button 812. It will be appreciated at this juncture that the preferred system keeps track of the number of labels printed by the customer. Upon reaching this stage in the process, the disclosed system communicates predetermined printer indicia to the user's computer to permit the user to print a label. These labels are effectively "prepaid" and may be perceived to have actual cash value, as the customer's credit card or account has been charged for the shipping transaction. Therefore, appropriate security measures are taken so as to ensure that the number of labels printed by the customer is monitored, and that each label printed contains different indicia that allow the system to determine if there are multiple labels printed for a single prepaid transaction. In accordance with one aspect of the invention, each label viewed and printed by the customer will be different and contain different security indicia, so as to minimize the likelihood of inadvertent use of multiple labels for a single transaction or fraud.

Generally, the user reviews the label 25 for accuracy of the human readable codes, and if approved, selects the FILE/PRINT command from the browser tool bar or menu.

In response, the ISS permits the user to print the label 25 at the printer 28 connected to the user's computer 20 (FIG. 1).

Further details of the label 25 are provided in the discussion associated with FIG. 37.

If the user has selected the LABEL I BUTTON 812, the routine branches to step 560 and a new browser window is "spawned" in the known manner, preformatted to landscape mode for printing, and containing a visible replica of the label that will be printed in response to the user selecting a PRINT button in the browser button bar or selecting the PRINT command from the known FILE menu, all in the known manner. By "spawning" a window, we mean generating and making active a new browser window in

the known manner of present day **Internet** browsers, the window containing only the label information ready to print, typically without any controls or other commonly found **Internet** browser features. In this manner, the customer can easily invoke the PRINT command for the active window and obtain a properly formatted (preferably in landscape printing mode) PRINT label 25 such as shown in FIG. 37.

In the event that a label misprints, the customer can reselect the LABEL button 812 until a satisfactory label is obtained.

After the label is viewed and printed, or the label window closed in the known manner by the user's selecting on the known "CLOSE" box, control passes to decision 562. At decision 562 the system tests whether the user has selected to view/print a receipt by selecting a VEEW/PRINT RECEIPT button 814 shown in FIG. 32. If affirmative, the system displays an ISS Receipt 818 as shown in FIG. 33. The receipt 818 contains the usual information about the transaction such as addresses, shipment details, charges, package details, etc. for retention and record keeping purposes by the customer.

If at decision 562 the user has not selected the VIEW/PRINT RECEIPT button, control passes to decision 566.

At decision 566 the system tests whether the user has selected a FINISH button 816 shown in FIG. 32, indicating that the user is satisfied that all labels for the current shipment have printed correctly. If not, control passes back to step 558 to receive further user input. If the FINISH button 816 was selected, the routine exits and control passes to a shipment finished routine, described next with reference to FIG. 21.

SHIPMENT FINISHED Routine
Turn now to FIG. 21 for a discussion of the SHIPMENT FINISHED routine 570, which should be read in conjunction with FIG. 34, which illustrates a SHIPMENT FINISHED page 820.

Starting at step 572 the system displays a SHIPMENT FINISHED page 820, which contains control buttons SHIP ANOTHER 830, VIEW MY SHIPPING HISTORY 832, and GO TO THE HOME Page 834, and waits for user input.
At decision 574 the system tests whether the user has selected the SHIP ANOTHER button 830, indicating a desire on the part of the customer to ship another package during the current session of communication with the system. If affirmative, control passes to step 576 and the user is returned to the SHIPPING routine 171 illustrated in FIG. 15, and exits.

Otherwise control passes to decision 578. .. ..

At decision 578 the system tests whether the user has selected the VIEW W SHIPPING HISTORY button 832, indicating a desire on the part of the customer to cause the system to retrieve and display information pertaining to the customer's prior shipments and the status thereof. If affirmative, control passes to step 582 and the routine branches to the SHIPPING HISTORY routine described in connection with FIG. 22, and exits. Otherwise control passes to decision 584.

At decision 584 the system tests whether the user has selected the GO TO THE HOME PAGE button 834, indicating a desire on the part of the customer to return to the SSP's home page. If affirmative, control passes to step 586, and the routine branches to the HOME PAGE routine described with reference to FIG. 5, and exits. Otherwise control returns to decision 574 to await user input.
SHIPPING HISTORY Routine
Turn now to FIG. 22 for a discussion of the SHIPPING HISTORY routine 580, which should be read in conjunction with FIG. 35, which illustrates a SHIPPING HISTORY page 836 and FIG. 36, which illustrates a SHIPMENT DETAILS page 856. The SHIPPING HISTORY page displays information in list form about one or more prior shipments by the customer, allows selection

of a date range within which to obtain information about the prior shipments, allows the user to command the system to search for historical information within the selected date range, and allows the user to view shipment details about selected shipments in the list of one or more prior shipments. The SHIPMENT DETAILS page contains specific information about a selected historical shipment.

Starting at step 590 the system displays the SHIPPING HISTORY page 836 containing shipping history information and controls, and awaits user input. The preferred SHIPPING HISTORY page includes, for example, a data field

840 for entry of a date range within which the user desires to obtain historical information, a GO button 842 that commands the system to retrieve historical information about prior shipments within the selected date range, a display region 844 for display of information identifying one or more prior shipments by the customer, radio selection buttons 848 for allowing user selection of a prior shipment for display of shipment details, a SHOW DETAIURECEIPT button 850, a SHIP AGAIN button 852, and a VOID SHIPMENT button 854.

At decision 592 the system tests whether the user has selected a date range from the drop down menu 840 of available date ranges and has also selected the GO button 842.

If not, the routine loops to continuously test, as no further operations are possible until a date range has been selected and the command has been issued to retrieve the shipping history information. If affirmative, control passes to step 594 and the system is operative to cause the mainframe computer associated with the SSP, which stores package level detail (PLD) information for a predetermined period of time, to retrieve the requested historical information. Preferably, this historical information is passed upwardly through the various components of the system to minimize retrieval latency, for example the information may be cached in an application server 78 or web front end server 50 (FIG. 2). The retrieved information is then displayed to the customer in a historical information display region 844 illustrated in FIG. 35. Control then passes to decision 596.
At decision 596 the system tests whether the user has selected a particular prior shipment with RADIO button 848.

If not, control returns to step 592 to receive user input. If affirmative, control passes to decision 598.

At decision 598 the system tests whether the user has selected the SHOW DETAIURECEIPT button 850. If affirmative, control passes to step 600 where the system retrieves the shipment history information corresponding to the selected shipment. This information is displayed in the preferred embodiment in a separate SHIPMENT DETAILS page, for example page 856 shown in FIG. 36. The SHIPMENT DETAILS page in the disclosed embodiment contains detailed information about a selected prior shipment. For example, addresses, shipment details, charges, tracking number, package details, reference numbers, and the like. The SHIPMENT DETAILS page preferably provides a button for viewing a receipt associated with the selected shipment via a VIEW RECEIPT button 858, and a button to return to the SHIPPING HISTORY page via BACK TO SHIPPING HISTORY button 860. These buttons operate to display receipt for the selected prior shipment or return to the SHIPPING HISTORY page, as appropriate.

Still referring to FIG. 22, if at decision 598 the user has not selected the SHOW DETAIURECEIPT button, control passes to decision 602. At step 602 the system tests whether the user has selected a SHIP AGAIN button 852, indicating a desire to use information from the selected prior shipment in connection with another shipment. If affirmative, control passes to step 604, and the routine exits by branching to the SHIPPING routine of FIG. 15. In this situation however, appropriate data fields of

the SHIPPING INFORMATION page

660 in FIG. 26 are pre-populated with information from the selected prior shipment. The customer can then readily navigate to accept terms and condition, payment, etc. with minimal additional data entry, thereby shipping another package to an intended recipient quickly and easily.

If at decision 602 the user has not selected the SHIP AGAIN button, control passes to decision 606. At decision 606 the system tests whether the user has selected the VOID SHIPMENT button 854, indicating a desire to void the selected shipment, if possible. If the user did not select the void button, control passes back to step 592 to await appropriate user input. If affmnative, control passes to step 608 where the system assesses the status of the selected prior shipment and determines whether the shipment can be voided. The shipment may be voided, for example, if the package has not yet been acquired by the SSP. On the other hand, a shipment typically cannot be voided if the package is enroute to the intended recipient or has already been delivered. The shipping service provider can determine appropriate voiding policy as desired.

The preferred system provides for the ability to inquire about or cancel an ODS request. To void an ODS request, the request for cancellation should come before the cut off time for an ODS request. An ODS order may also be voided when the order has not yet been picked up. If the shipment has been scanned or otherwise acquired by the SSP, then the order has been fulfilled and cannot be voided.

After voidina the selected shipment, if indicated as possible, control passes back to step 592 to await user input.

RATE & VALIDATE Routine
Turn now to FIG. 23 for a discussion of the RATE & VALIDATE routine 610 that is operative to validate the postal codes. In other words, to determine if they are real and whether the SSP can deliver the indicated type of package with the selected type of delivery to such postal code. and to calculate the charges to be assessed for such delivery. The routine 610 is preferably executed by providing information including the :n sender's and recipient's postal codes, selected package shipment type, and selected shipment type. The routine 610 provides the Rating & Validation function 64 shown in FIG. 1.

To perform the rating and validating functions, the ISS includes a software component, a Rating and Validation :n Engine (RAVE) (not separately illustrated). The RAVE provides shipping and package cost option calculations, and also embodies the shipping service provider's business rules regarding package, shipment, service and accessories. The RAVE is typically updated whenever there are rate changes to the shipping service provider.

The user's credit card information is also preferably processed through the RAVE. This will ensure that the card is valid and has the necessary funds to cover the cost of the current shipment. The RAVE therefore preferably works in conjunction with a credit card clearing house. Validation will be directed to the dollar amount, credit card number, and expiration date. The validation process may alert the user if there is a problem with their account.

In a preferred embodiment of the present invention, security measures are put in place to deter multiple credit card attempts. This will deny access and shut-off the system to someone who attempts multiple invalid credit card numbers. To help prevent credit card fraud, the ISS preferably permits only a limited number of wrong expiration date entries per credit card number before blocking that card for a 24-hour period.

Starting now a t step 612, the first step taken in routine 610 is to receive the postal codes of sender and recipient (for example U.S. postal

zip codes), and search the system's database for these postal codes. At decision 614, the system determines whether the indicated zip codes are valid. If they are not, control passes to step 616 where the system prepares a return message indicating that the provided postal codes are not valid or cannot be served by the SSP with the selected type of package and type of delivery option. The routine then returns, passing the return message to the calling routine.

If the system deten-nines that the postal codes are valid and that the selected types of package and service are possible, control passes to step 618. At this step the system searches a database for the selected service, accessories, and access methods. At step 620 the system determines the shipment's most probable delivery route. At step 622 the system calculates the cost of the shipment, utilizing the indicated package type and delivery options, and determines whether funds are available from the customer using the selected III payment method. Typically. this entails access to the credit card authorization system 76 as shown in FIG. 2.

At step 622 the system prepares a return message containing the total charges for the shipment, for inclusion and display in the shipment summary, for example, in the display area for Total Charges 734 in FIG. 27. Upon completion of this step the return message is passed to the CALLING routine, and the RATE & VALIDATE routine 610 exits.

Shipping Label
Turn now to FIG. 37 for a discussion of features of the disclosed shipping label 25 that is printed by the customer utilizing print indicia provided to the customer's computer 20 system from the ISS 10.

A label 25 generated in accordance with a preferred embodiment of the present invention contains a number of information containing regions, some machine readable via bar code and/or Maxicodeo, some human readable, and some security indicia. Information contained in the label is laid out to maximize use of space as well as machine readability. A Return Address region 870, which may be different from the Origin Address, appears in the upper left hand comer. Thus, a person traveling can specify an Origin Address for pricing and pick-up purposes, but use a home office for the return address.

Below the Return Address region appears a Ship To address region 872 an d in the upper right hand corner appears a Package Count region 874 indicating how many packages are in the present shipment and the number of the present package within that shipment.

Below the Ship To address is a square block containing a Maxicodee symbol 876. A Maxicodeo is a proprietary machine-readable dense code containing all the text of the label and optionally other package level detail (PLD) information concerning the customer, the contents, special handlin2, etc. Those skilled in the art will understand that at least one hundred characters of text can be stored in a Maxicode"' and machine-read with a scanner.

To the right of the Maxicodee is a human readable Sort Code region 882, which identifies an Initial Sorting Hub 878 and a Sortina Belt Code 880 which identifies the sorting belt within the hub 42 to which the package is first routed.

A Final Destination postal code appears below the human readable codes 878, 880 in the form of a Code 128 or other popular barcode 882. The postal code may be reproduced in human readable form (not shown) if desired.

A horizontal box below the codes just described contains text 884 describing the level of the service and a large font alphanumeric Level of Service code 886. Irm-nediately below is a IZ code 888 which serves as

a tracking number. The IZ code itself comprises an alphanumeric 6-digit Customer Account Number 890, a Level of Service identifier 892, a non sequential Reference Numeral 894, and a Check Sum digit 896.

The Customer Account Number 890 may contain a special character to designate a particular kind of payment, such as carrier account or a credit card only **Internet** account. Here for example, the letter "T" designates a credit card account.

The tracking number may be encoded in a machine-readable barcode recion 898. A unique 1Z number is generated for each tn label printed, for security purposes, as discussed.

In the lowermost section of the label, a billing identifier 900 states the type of billing. As shown, the "BILLING: PREPAID" identifier signals to the carrier's personnel to accept the package because payment has been validated. Also, in this section are one or more lines of User Text 902 that may be used to identify the customer's reference for customer internal accounting, filing, or the like. This box may also contain the version number of the ISS software that created the label, for technical support and help desk use.

in the lower left of the label block is a Logo region.

According to one aspect of the invention, personnel of the shipping service provider may be instructed not to accept this type of label unless the Logo 904 and indicia indicative of payment such as the BILLING: PREPAID identifier 900 are both present. This combination of identifiers helps to detect fraudulent use of copies of shipping labels. It will therefore be appreciated that the various features of the label, working in combination, are security measures against fraudulent reuse of a label, or of copying of a label, or of printing multiple copies of a z:1 label.

As discussed in connection with the LABEL PRINTING routine, features of the label printing process assist in providing security for the label and guarding against fraud. For example, after data entry for a shipment, a label 25 is presented in a new ("spawned") browser window for user inspection and printing using the browser PRINT function. Also, to avoid label printing problems the ISS may query the user's computer 20 to determine the browser type used by the customer and provide an appropriate page setup.

Finally, the labels may be printed sideways within half of a standard 8 1/2" x I I" page which can then be folded and inserted into a transparent envelope attached to a package, or attached directly to the package.

As will be understood by those skilled in the art, the shipping label 25 is not limited to the format described above.

The information included in the format described above may be rearranged, deleted, or added to create labels of different configurations. For example, the Shipped From block, Package Information block, Shipped To block, and Customer block may be arranged to the left of the label, while the Maxicodeo block, Postal Barcode block, Tracking Number Barcode block and Routing Instructions block may be grouped to the right hand side. Again, these may be rearranged to suit the needs of the user or the shipping service provider.

An additional routing and instruction section on the label 25 (not shown) may provide for special instructions. This may include a required signature, earliest delivery times, verbal confirmation of delivery, COD, hazardous material, international billing options. Within the international billing options, the routing instructions sections may specify split billing, third-party billing, domestic U.S. billing options, etc. A package information block (not shown) may include

information regarding the package such as weight, count, the shipment
number for thermal way bill, the shipment weight, and the shipment
dimensional weight.

Although the present invention has been disclosed and described in terms
of preferred embodiments, it is not intended that the invention be
limited to such embodiments.

Modifications within the spirit of the invention will be apparent to
those skilled in the art. The scope of the present invention is to be
limited only by the claims which follow.

Claim
CLAIMS

What is claimed is:
1. A system for processing information
associated with a package handled by a shipping service provider in
connection with delivery of the package to an intended recipient,
comprising:

an order-receiving system operative to receive a customer-entered order
to ship a package from an **Internet** accessible computer system and
communicate said customer entered order to a dispatch system; a dispatch
system responsive to receipt of said customer-entered order for
generating a dispatch order for pick up of the package; and a
communication system for communicating said dispatch order to a selected
service person, whereby the selected service person, in response to
receipt of the dispatch order, picks up the package for delivery via the
shipping service provider to the intended recipient.

2. The system of claim 1, further comprising a communications receivine,
device used by the selected service person for receiving the dispatch
order.

3. The system of claim 1, further comprising a package information
processing component associated with the order-receiving system for
processing information entered by the customer via the **Internet**
accessible computer system and validating the information prior to
generating the dispatch order.

4. The system of claim 1, wherein the order to ship a package is an on
call order for the shipping service Z:, provider to pick up the package
at a place selected by the customer and deliver the package to the
intended recipient.

5. The system of claim 1, wherein the order to ship a package is an order
for the shipping service provider to pick up the package at a drop box.

6. The system of claim 1, wherein the order receiving system is operative
to provide predetermined print label indicia to the customer's **Internet**
accessible computer system for printing a label for affixation to the
package, the label including predetermined authenticity indicia.

7. The system of claim 6, wherein the order receiving system is operative
to provide the print label indicia in response to validation of
information input by the customer via the **Internet** accessible computer
system.

8. The system of claim 7, wherein the order receiving system is operative
to accepts information from the label during scanning of the label on
call pickup or when processed at a drop box.

9. The system of claim 1, further comprising a package shipment status
information system operative for receiving status information
corresponding to the status of shipment of the package and for providing

the status information for access by the customer.

10. The system of claim 9, wherein the status information comprises tracking information corresponding to the package.

11. A method for processing information
associated with a package handled by a shipping service provider in connection with delivery of the package to an intended recipient, comprising:

receiving a customer-entered order to ship a package from an **Internet** accessible computer system and communicating the customer-entered order to a dispatch system; at the dispatch system, generating a dispatch order for pick up of the package; and communicating the dispatch order to a selected service person, whereby the selected service person, in response to receipt of the dispatch order, picks up the package for delivery via the shipping service provider to the intended recipient.

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12. The method of claim 11, further comprising the step of receiving the dispatch order with a communications receiving device used by the selected service person.

13. The method of claim 11, further comprising the step of processing information entered by the customer via the **Internet** accessible computer system and validating the information prior to generating the dispatch order.

14. The method of claim 11, wherein the order to ship a package is an on call order for the shipping service provider to pick up the package at a place selected by the customer and deliver the package to the intended recipient.

15. The method of claim 11, wherein the order to ship a package is an order for the shipping service provider to pick up the package at a drop box.
16. The method of claim 11, further comprising the step of providing predetermined print label indicia to the customer's **Internet** accessible computer system for printing a label for affixation to the package, the label including predetermined authenticity indicia.

17. The method of claim 16, wherein the step of providing the print label indicia is in response to validation of information input by the customer via the **Internet** accessible computer system.

18. The method of claim 17, further comprising the step of accepting information derived from label indicia obtained by scanning a label affixed to the package on call pickup or when processed at a drop box.

19. The method of claim 11, further comprising the step of storing status information corresponding to the status of shipment of the package and providing the status information for access by the customer.

20. The method of claim 19, wherein the status information comprises tracking information corresponding to the package.

2 1. A system for pick up of a package by a shipping service provider for delivery of the package to an intended recipient, comprising:
an **Internet** accessible computer system for allowing a customer to enter an order to ship a package to an intended recipient; an order-receiving system operative to receive a customer-entered order from said **Internet** accessible computer system and communicate said customer-entered order to a dispatch system; a dispatch system responsive to receipt of said customer-entered order for Generating a dispatch order for acquisition of the package; a communication system for communicating said dispatch order

to a selected service person; and a communications receiving device used by the selected service person for receiving the dispatch order, whereby the selected service person, in response to receipt of the dispatch order, acquires the package for delivery via the shipping service provider to the intended recipient.

22. The system of claim 21, wherein the order to ship a package is an on call order for the shipping service provider to acquire the package at a place selected by the customer and deliver the package to the intended recipient.

23. The system of claim 2 1, wherein the order to ship a package is an order for the shipping service provider to acquire the package at a drop box.

24. The system of claim 2 1, wherein the dispatch system comprises a dispatch center responsive to receipt of said customer-entered order for determimng whether a pickup point associated with said customer- entered order is within a predetermined service area for demand pickup by a selected service person and, in response to a determination that the pickup point is within the predetermined service area, generating the dispatch order for communication to the selected service person.

25. The system of claim 24, wherein the dispatch system is operative for determining whether a pickup point associated with said customer-entered order is within a predetermined service area for demand pickup by a selected service person and, in response to a determination that the pickup point is not within the predetermined service area, providing information to the customer about locations for t= package drop-off.

26. The system of claim 24, wherein dispatch system is operative for validating that pickup service is available for the order by reference to a zip code associated with the customer.

27. The system of claim 21, further comprising a delivery information acquisition device (DLAD) for scanning a label on the package to acquire information about the package.

28. The system of claim 21, wherein the communication system for communicating said dispatch order is selected from the group comprising: an e-mail message delivery system, a cellular telephone system, a pager system, a wireless personal communication system (PCS), an ARDIS network, Bluetooth devices, or other proprietary data communications system.

29. The system of claim 2 1, further comprising a printer associated with the **Internet** accessible computer system operative for receiving predetermined print label indicia from the order-receiving system and printing a label for affixation to the package, the label including predeteni-iined authenticity indicia.

30. The system of claim 29, wherein the predetermined authenticity indicia are machine readable.

31. The system of claim 29, wherein the predetermined authenticity indicia are recognized by the order receiving system as indicative of prepaid shipping, and cause the order-receiving system to accept information from the label and Z- process the package for shipment.

32. The system of claim 31, wherein the order receiving system is operative to accept information from the label during scanning of the label at on call pickup or when processed at a drop box.

33. The system of claim 2 1, further comprising a package shipment status information system operative for receiving status information corresponding to the status of 4=1 shipment of the package by the customer and for providing the status information for access by the customer.

34. The system of claim 33, wherein the status information system provides status information to the customer via the **Internet** accessible computer system.

35. The system of claim 33, wherein the status information comprises the shipping history of a predetermined number of prior package shipments by the customer.

36. The system of claim 33, wherein the status information comprises package tracking information.

37. The system of claim 21, further comprising a payment system associated with the order-receiving system for L receiving payment information from the customer and processing a customer payment for shipment of the package.

38. The system of claim 2 1, wherein the order receiving system is operative to provide a shipping information interface via an **Internet** site, the shipping information interface being accessible by the customer's **Internet** accessible computer system and including shipment order information fields for I= customer entry of shipment order information associated with shipment of the package.

39. The system of claim 38, wherein the shipment order information fields are prepopulated with customer profile information retrieved from a customer profile information database associated with the order-receiving system.

40. The system of claim 38, wherein the shipment order information fields are prepopulated with information from a prior shipment selected from a display of prior shipments by the customer at the customer's **Internet** accessible computer system.

41. The system of claim 38, wherein the customer's **Internet** accessible computer system includes a customer address book containing a plurality of pre-entered selectable addresses of intended recipients, and wherein the customer creates the shipping order by accessing the shipping information interface and populating the shipment order information fields. of the shipping information interface by selection of an address from the customer address book.

42. The system of claim 38, wherein the shipment order information fields include a "ship from" address field that can be filled in by the customer with information indicative of an address different from the regular shipping address associated with that customer, whereby a customer such as a traveling salesperson can ship a package from a location other than the customer's regular place of business.

43. The system of claim 38, wherein the shipping information interface is operative to allow a customer to access functions of the order-receiving system selected from the group comprising: view shipping history, track a shipment, use similar shipment to process a new shipment. void a shipment, reprint a label, reprint a receipt, view or edit profile information, view or edit an address book, set or change shipping or payment preferences, or change a password.
44. The system of claim 38, wherein the shipment order information fields include a "request package pickup" field that can be selected by the customer to cause the order-receiving system to generate the customer-entered on call order, or deselect the request package pickup field, whereby a customer can select on call pickup or alternatively select to deliver the package to a drop box.

45. The system of claim 38, wherein the shipment order information fields include a "ship to" address field that

can be filled in by the customer with information indicative of an address of the intended recipient.

46. The system of claim 45, wherein the "ship to" address field is populated with information entered manually by the customer, from an address book stored associated with the customer, or from information from a prior shipment by the customer.

47. The system of claim 46, further comprising an address validation component operative for processing the I= ship to address field and determining whether an address of a package recipient is a valid address, and further operative for providing an indication of address invalidity in the event that the address of the package recipient is invalid.
48. The system of claim 21, wherein the order includes an information field indicative of a pickup time for the package by the shipping service provider.

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49. The system of claim 21, wherein the order receiving system comprises an **Internet** world wide web (WWW) server.

50. The system of claim 49, wherein the WWW server is operative for generating a web interface for interaction by the customer's **Internet** accessible computer system.

51. The system of claim 21, wherein the order receiving system is operative to provide a request package pickup interface via an **Internet** site, the request package pickup interface being accessible by the customer's **Internet** accessible computer system and including package pickup information 1z fields for customer entry of package pickup information associated with shipment of the package.

52. The system of claim 2 1, wherein the order receiving system is operative to provide a shipment summary C) interface via the **Internet** site, the shipment summary interface being accessible by the customer's **Internet** accessible computer system and including editable shipment summary information fields associated with an order to ship a package.

53. The system of claim 52-, wherein the shipment summary interface is operative to display service options for selection by the customer selected from the group comprising: changing information associated with shipment of the package, adding another package to the shipment, selecting to view a drop-off locator, and selecting service for delivery of the package sooner.

54. The system of claim 2 1, wherein the order receiving system is operative to provide a payment interface via the **Internet** site, the payment interface being accessible by the customer's **Internet** accessible computer system and including selectable payment options associated with an order to ship a package.

55. The system of claim 54, wherein the payment options are selected from the group comprising:

payment from a customer's existing account with the shipping service provider, payment via credit card on file with the shipping service provider, and payment via other credit card.
56. The system of claim 54, wherein the order receiving system is operative, in response to selection by the Z:! customer of a payment option, to confirm the payment option selected by the customer and further process the order in response to confirmation of the payment option.

57. The system of claim 56, wherein the order receiving system is operative, in response to confirmation of the payment option, to provide a print labels interface via the **Internet** site, the print labels

interface being accessible by the customer's **Internet** accessible computer system and including instructions for printing a label for association with the package.

58. The system of claim 2 1, wherein the order receiving system is operative to provide a shipping history interface via the **Internet** site, the shipping history interface being accessible by the customer's **Internet** accessible computer system and including shipping history information fields for allowing customer selection of shipping history display options.

59. The system of claim 58, wherein the order receiving system is operative to display shipping history Z:I I information to the customer in response to selection of a shipping history display option.

60. The system of claim 58, wherein the shipping history display options include a track shipment option, and wherein the order-receiving system is operative to display shipment tracking information associated with a selected prior. order by the customer in response to selection of the track shipment option.

61. The system of claim 58, wherein the shipping Z:

history display options include a "ship again" option, wherein the order-receiving system is operative to display information Z associated with a selected prior order by the customer, and wherein the order-receiving system is operative to use information from the selected prior order to process a new shipment order in response to customer selection of the ship again option.

62. The system of claim 58, wherein the shipping history display options include a "shipment details" option, wherein the order-receiving system is operative to display information associated with at least one prior order by the customer, and wherein the order-receiving system is operative to display detailed information associated with a selected prior order of the customer in response to selection of the shipment details option in association with selection of a particular prior order.

63. The system of claim 62, wherein the shipment details options include information selected from the group comprising: viewing a receipt for a selected prior shipment, reprinting a receipt for a selected prior shipment, reprint a label for a selected prior shipment, and tracking a package from a selected prior shipment.

64. The system of claim 21, further comprising a customer profile information system associated with the order receiving system, the customer profile information system storing preference information associated with the customer.

65. The system of claim 64, wherein order receiving system is operative to display a shipping order interface on the customer **Internet** accessible computer system, the shipping order interface including information fields for customer entry of information associated with an order to ship a package, and wherein the information fields are pre-populated with customer profile information from the customer profile information system.
66. A method for delivery of a package by a shipping service provider to an intended recipient, comprising the steps of:

receiving an order entered by a customer at an **Internet** accessible computer system to ship a package to an intended recipient; communicating the order to an order-receiving system; at the order-receiving system, processing the order to validate information associated with the order; in response to validation of information associated with the order, communicating the order to a dispatch system; at the dispatch system, generating a dispatch order for pick up of the package; communicating the

dispatch order to a selected service person; receiving the dispatch order at a commumications receiving device associated with the selected service person; in response to receipt of the dispatch order, acquiring the package, whereby the selected service person, in response to receipt of the dispatch order, picks up the package for delivery to the intended recipient.

67. The method of claim 66, wherein the order to ship a package is an on call order for the shipping service provider to pick up the package at a place selected by the customer and deliver the package to the intended recipient.
68. The method of claim 66, wherein the order to ship a package is an order for the shipping service provider to pick up the package at a drop box.

69. The method of claim 66, further comprising the steps of:

deten-ninina whether a pickup point associated with the order is within a predetermined service area for demand pickup by a selected service person and, in response to a determination that the pickup point is within the predetermined service area, generating the dispatch order for communication to the selected service person.

70. The method of claim 69, further comprising the steps of:

determining whether a pickup point associated with the order is within a predetermined service area for demand pickup by a selected service person, and in response to a determination that the pickup point is not within the predetermined service area, providing information to the customer via the **Internet** accessible computer system about locations for package drop-off.

71. The method of claim 69, further comprising the step of validating that pickup service is available for the order by reference to a zip code associated with the customer.

72. The method of claim 66, further comprising the step of acquiring information about the package by scanning t= a label on the package with a delivery information acquisition device (DLAD).

73. The method of claim 66, wherein the step of communicating the dispatch order is carried out by CI communicating a message via a technology selected from the group comprising: an e-mail message, a cellular telephone In system, a pager system, a wireless personal communication system (PCS), an ARDIS network, Bluetooth devices, or other proprietary data communications system.

74. The method of claim 66, further comprising the steps of:

communicating predetermined print label indicia from the order-receiving system to the customer's **Internet** accessible computer, and locally printing a label corresponding to the print label indicia for affhxation to the package, the label including predetermined authenticity indicia.

75. The method of claim 74, wher predetermined authenticity indicia are machine readable.

76. The method of claim 74, wherein the predetermined authenticity indicia are recognized by the order receivin system as indicative of prepaid shipping, and further 9 Z=) comprising the steps of accepting information from the label at the order-receiving system and processing the package for shipment.

77. The method of claim 76, further comprising the step of accepting information from the label in response to I= scanning of the label during on call pickup or when processed at a drop box.

78. The method of claim 66, further comprising the steps of:

receivin OF status information from a package delivery system corresponding to the status of shipment of the package by the customer, and providing the status information to the customer.

79. The method of claim 78, wherein information is provided to the customer via the accessible computer system.

80. The method of claim 78, wherein the status information comprises the shipping history of a predetermined number of prior package shipments by the customer.

81. The method of claim 78, wherei information comprises package tracking information.

82. The method of claim 66, further comprising the steps of.

receiving payment infonnation from the customer, and processing a customer payment for shipment of the package.

83. The method of claim 66, further comprising the step of providing a shipping information interface via an **Internet** site, the shipping information interface being accessible by the customer's **Internet** accessible computer system and including shipment order information fields for customer entry of shipment order information associated with shipment of the package.

84. The method of claim 83, further the step of prepopulating selected shipment order i fields with customer profile infon-nation retrieve customer profile information database.

85. The method of claim 83, further comprising the step of prepopulating selected shipment order information fields with information from a prior shipment selected from a display of prior shipments by the customer at the customer's **Internet** accessible computer system.

86. The method of claim 83, wherein the customer's **Internet** accessible computer system includes a customer address book containing a plurality of pre-entered selectable addresses of intended recipients, and wherein the customer creates the shipping order by accessing the shipping information interface and populating the shipment order information fields of the shipping information interface by selection of an address from the customer address book.

87. The method of claim 83, wherein the shipment order information fields include a "ship from" address field that can be filled in by the customer with information indicative of an address different from the regular shipping address associated with that customer, whereby a customer such as a traveling salesperson can ship a package from a location other than the customer's regular place of business.

88. The method of claim 83, wherein the shipping information interface is operative to allow a customer to access functions of the order- receiving system selected from the group comprising: view shipping history, track a shipment, use similar shipment to process a new shipment, void a shipment, reprint a label, reprint a receipt, view or edit profile information, view or edit an address book, set or change shipping or payment preferences, or change a password.

89. The method of claim 83, wherein the shipment order information fields include a "request package pickup" field that can be selected by the customer to cause the order-receiving system to generate the customer-entered on call order, or deselect the request package pickup field, whereby a customer can select on call

pickup or alternatively select to deliver the package to a drop box.

90. The method of claim 83, wherein the
shipment order information fields include a "ship to" address field that
can be filled in by the customer with information indicative of an
address of the intended recipient.

91. The method of claim 90, wherein
to" address field is populated with information entered by the customer,
from an address book stored associ the customer, or from information from
a prior shipmc customer.

92. The method of claim 90, further comprising the steps of:

processing the ship to address field to validate the ship to address,
determining whether an address of a package recipient is a valid address,
and providing an indication of address invalidity in the event that the
address of the package recipient is invalid.

93. The method of claim 66, wherein the order includes an information
field indicative of a pickup time for the package by the shipping service
provider.

94. The method of claim 66, wherein the order receiving system comprises
an **Internet** world wide web (WV;W) server.

95. The method of claim 94, wherein the VAW server is operative for
generating a web interface for interaction by the customer's **Internet**
accessible computer system.

96. The method of claim 21, further comprising the step of:
providing a request package pickup interface via an **Internet** site, the
request package pickup interface being accessible by the customer's
Internet accessible computer system and including package pickup
information fields for customer entry of package pickup information
associated with shipment of the package.

97. The method of claim 66, further comprising the step of providing a
shipment summary interface via the **Internet** site, the shipment summary
interface being accessible by the customer's **Internet** accessible
computer system and including editable shipment summary information
fields associated with an order to ship a package.

98. The method of claim 97, wherein the
shipment summary interface is operative to display service options for
selection by the customer selected from t comprising: changing
information associated with shi the package, adding another package to
the shipment, to view a drop-off locator, and selecting service for d the
package sooner.

99. The method of claim 66, further comprising the step of:

providing a payment interface via the **Internet** site, the payment
interface being accessible by the customer's Z: I **Internet** accessible
computer system and including selectable payment options associated with
an order to ship a package.

100. The method of claim 99, wherein the payment options are selected
from the group comprising:

payment from a customer's existing account with the shipping service
provider, payment via credit card on file with the shipping service
provider, and payment via other credit card.

101. The method of claim 99, further comprising the steps of:

in response to selection by the custon
payment option, confirining the payment option selectc customer, and
processing the order in response to confiri the payment option.

102. The method of claim 10 1, further comprising the steps of:

in response to confirmation of the payment option, providing a print
labels interface via the **Internet** site, the print labels interface
being accessible by the customer's **Internet** accessible computer system
and including instructions for printing a label for association with the
package. and printing a label for affixation to the package.

103. The method of claim 66, further comprising the step of:

providing a shipping history interface via the L **Internet** site, the
shipping history interface being accessible by zn the customer's
Internet accessible computer system and including shipping history
information fields for allowing Z customer selection of shipping history
display options.

104. The method of claim 103, further comprising the steps of:

displaying shipping history informatio
customer in response to selection of a shipping histo option.

105. The method of claim 103, wherein the shipping history display
options include a track shipment option, and further comprising the step
of displaying shipment tracking 4:) information associated with a
selected prior order by the customer in response to selection of the
track shipment option.
106. The method of claim 103, wherein the shipping history display
options include a "ship again" option, and further comprising the steps
of:

displaying information associated with a selected prior order by the
customer, and utilizing information from the selected prior order to
process a new shipment order in response to customer selection of the
ship again option.

107. The method of claim 103, wherein the shipping history display
options include a "shipment details" option, and further comprising the
steps of:

displaying information associated with at least one 4:

prior order by the customer, and
displaying detailed information associated with a rn selected prior order
of the customer in response to selection of the shipment details option
in association with selection of a particular prior order.

108. The method of claim 107, wherein the shipment details options
include information selected from the group comprising: viewing a receipt
for a selected prior shipment, reprinting a receipt for a selected prior
shipment, reprint a label for a selected prior shipment, and tracking a
package from a selected prior shipment.

109. The method of claim 21, further comprising the step of storing
preference information associated with the customer in a customer profile
information system.

110. The method of claim 109, further comprising the steps of:

displaying a shipping order interface on the customer **Internet**
accessible computer system, the shipping order interface including
information fields for customer entry of information associated with an
order to ship a package, and prepopulating the information fields with

customer profile information from the customer profile information system.

I 11. A method for shipping a package from a shipping service provider's customer to an intended recipient, comprising the steps of:

receiving a customer-entered order to ship a package from an **Internet** accessible computer system operated by a customer; validating shipping information associated with the customer-entered order; in response to validating the shipping information, communicating printer indicia to the customer at the lnternet accessible computer system such that the customer is enabled to print a label for affixation to the package, the label containing predetermined label shipping information; acquiring the package from the customer; scanning a label affixed to the package to obtain the label shipping information from the label on the package; and delivering the package to the intended recipient in accordance with the shipping information entered by the customer and label shipping information obtained from the label affixed to the package.

112. The method of claim I 11, wherein the step of scanning the label is carried out at the point of acquisition of the package.

113. The method of claim 111, further comprising the step of obtaining a payment from the customer for shipping the package, and wherein the validating step includes validating the payment.

114. The method of claim 112, wherein the step of receiving the payment from the customer comprises receiving credit card payment infonnation from the customer.
115. The method of claim I 11, further comprising the steps of:

in response to customer selection of an on call pickup option via the **Internet** accessible computer system, generating a dispatch order for pick up of the package; and communicating the dispatch order to a selected service person, whereby the selected service person, in response to receipt of the dispatch order, picks up the package for delivery via the shipping service provider to the intended recipient.

116. The method of claim 115, further comprising the step of receiving the dispatch order with a communications receiving device used by the selected service person.

117. The method of claim 111, wherein the step of acquiring the package comprises picking up the package at a place selected by the customer.

118. The method of claim 111, wherein the step of acquiring the package comprises picking up the package at a drop box.

119. The method of claim 111, further comprising the step of accepting information derived from scanning label indicia on the label affixed to the package at on call pickup or when processed at a drop box.
120. The method of claim I 11, further comprising the step of storing status information corresponding to the status of shipment of the package and providing the status information for access by the customer.

121. The method of claim 120, wherein the status information comprises tracking information corresponding to the package.

122. A method for facilitatinc, customer creation of a label for use on a package to be delivered by a shipping service provider from a customer to an intended recipient, comprising the steps of:

obtaining shipping information from a customer corresponding to an order to deliver a package via an **Internet** accessible computer system operated by the customer; validating the shipping information received from the customer; in response to validating the shipping information,

communicating print label indicia to the customer at the **Internet**
accessible computer system, the print label indicia including
predetermined authenticity indicia, ship to address indicia, and level of
service indicia.

123. The method of claim wherein the label is printed by a customer using
the print label indicia at a printer associated with the **Internet**
accessible computer system.

124. The method of claim 121, wherein the authenticity indicia are
machine readable.

125. The method of claim 122, wherein the predetermined authenticity
indicia are recognized by an order receiving system of the shipping
service provider as indicative of prepaid shipping.

126. The method of claim 122, wherein the validating step includes the
step of receiving a payment from the customer.

127. The method of claim 126, wherein the step of receiving a payment
from the customer comprises receiving a credit card payment.

128. The method of claim 122, wherein the validating step includes
validating the address of the intended recipient.

129. The method of claim 122, wherein the label includes regions selected
from the group comprising:

Z!
a return address region for containing information corresponding to a
return address of a package sender; a ship to address region for
containing information corresponding to a destination address of an
intended recipient for the package; a number of packages region for
containing information corresponding to the number of packages contained
in a shipment of a plurality of packages; a machine readable encoded
region for containing text of the label and other package information in
a form readable by an optical scanning device operated by a person
associated with the shipping service provider; a human readable sort code
region for containing information relating to identification of a hub and
sortation belt of automated packaged handling equipment associated with
the shipping service provider; a second machine readable
region)containing a postal code for the destination address of the
intended recipient for reading by optical scanning equipment operated by
a person associated with the shipping service provider; a level of
service indicating region for containing information corresponding to a
selected level of service provi ed by the shipping service provider and
associated with the package; a tracking number region forcontaining
information corresponding to a tracking number associated with the
package, the tracking number including an indiciurn identifying the
number as a tracking number, a customer account number, a level of
service indicator corresponding to the level of service indicated in the
level of service indicating region, and a predetermined reference number
determined by the shipping service provider; a third machine readable
region for containing the information of the tracking number region in a
machine readable format for reading by optical scanning equipment
operated by a person associated with the shipping service provider; and a
type of billing indicator region for containing C CD information
corresponding to a type of billing for the shipment service provided by
the shipping service provider.

130. The method of claim 122, wherein the authenticity indicia comprises
human readable identifying indicia associated with the shipping service
provider, and is located in a predetermined identifying indicia region.

13 1. The method of claim 12-2. wherein the step of printing the label
comprises using a print function associated with an **Internet** browser

computer program on a personal computer operated by the customer.

132. The method of claim 13 1, further comprising the steps of:

displaying information corresponding to selected Z:) regions of the label in an **Internet** browser computer program window opened when the customer accesses an **Internet** accessible computer shipping system operated by the shipping service provider.

13 3. The method of claim 13 1, further comprising the steps of:

automatically formatting a printer for landscape orientation for the label, which is folded in half after printing to form a complete label, whereby the label is receivable in a standard plastic window for an adhesive plastic label provided by the shipping service provider.

134. The method of claim 122, further comprising the steps of:

querying the customer's **Internet** accessible computer to determine a browser type, and providing a page setup command to cause proper printing of the label for a determined type of browser.

135. The method of claim 122, wherein the authenticity indicia comprises indicia for enabling personnel of the shipping service provider to recognize that the label is authentic, the authenticity indicia comprising:

a billing prepaid indicator region for
containing infon-nation indicating that the shipment service provided by the shipping service provider has been prepaid; and a predetermined identifying region for containing identifying indicia associated with the shipping service provider.

136. A method for delivering a package by a shipping service provider from a customer to an intended recipient, comprising the steps of:

communicating printer indicia. to a customer via an **Internet** connection for printing a label remotely from the shipping service provider, the printer indicia comprising at least machine readable indicia containing shipping information encoded thereon and authenticity indicia; scanning the machine readable indicia on a label affixed to the package at the point of acquisition of the package to obtain the shipping information encoded on the label; verifying the authenticity of the label at the point of acquisition of the package by reference to the authenticity indicia on the label; and in response to verifying the authenticity of the label, introducing the package into the shipping service provider's package handling systems for delivery of the package.

137. The method of claim 136, wherein the step of verifying the authenticity of the label comprises visual inspection of the label for the presence of predetermined identifying indicia associated with the shipping service provider.

138. The method of claim 136, wherein the step of verifying the authenticity of the label comprises processing the machine readable indicia to verify that the label includes the predetermined authenticity indicia.

139. The method of claim 136, further comprising L the steps of:

obtaining shipping information from the customer corresponding to an order to deliver the package via an **Internet** accessible computer system operated by the customer; validating the shipping information received from the customer; in response to validating the shipping information, communicating print label indicia to the customer at the **Internet** accessible computer system, the print label indicia including the

predetermined authenticity indicia.

140. The method of claim 139, wherein the label is printed by a customer using the print label indicia at a printer associated with the Internet accessible computer system.

141. The method of claim 136, wherein the predetermined authenticity indicia are recognized by an order receiving system of the shipping service provider as indicative of prepaid shipping.

142. The method of claim 139, wherein the validating step includes the step of receiving a payment from the 4n customer.

143. The method of claim 142, wherein the step of receiving a payment from the customer comprises receiving a credit card payment.

144. The method of claim 139, wherein the validating step includes validating the address of the intended recipient.

145. The method of claim 136, wherein the label includes regions selected from the group comprising:

a return address region for containing information corresponding to a return address of a package sender; a ship to address region for containing information corresponding to a destination address of an intended recipient for the package; a number of packages region for containing information corresponding to the number of packages contained in a shipment of a plurality of packages; a machine readable encoded region for containing text of the label and other package information in a form readable by an optical scanning device operated by a person associated with the shipping service provider; a human readable sort code region for containing information relating to identification of a hub and sortation belt of automated packaged handling equipment associated with the shipping service provider; a second machine readable region)containing a postal code for the destination address of the intended recipient for reading by optical scanning equipment operated by a person associated with the shipping service provider; a level of service indicating region for containing information corresponding to a selected level of service provi ed by the shipping service provider and associated with the package; a tracking number region for containing information corresponding to a tracking number associated with the package, the tracking number including an indicium identifying the number as a tracking number, a customer account number, a level of service indicator corresponding to the level of service indicated in the level of service indicating region, and a predetermined reference number determined by the shipping service provider; a third machine readable region for containing the information of the tracking number region in a machine readable format for reading by optical scanning equipment operated by a person associated with the shipping service provider; and a type of billing indicator region for containing information corresponding to a type of billing for the shipment service provided by the shipping service provider.

146. A method for verifying the validity of a shipment of a package from a package sender to an intended recipient via a shipper service provider, comprising the steps of:

communicating predetermined printer indicia to the package sender, the printer indicia operative for enabling the printing of a customized label on a printer coupled to a computer system associated with the package sender, the customized label including predetermined machine readable security indicia; prior to processing the package for shipment, reading the machine readable security indicia on the customized label with a reading device associated with the shipping service provider; verifying the machine readable security indicia with a verifying device associated with the shipping service provider; and in response to detection of

invalid security indicia with the verifying device, indicating the package as invalid.

147. The method of claim 146, further comprising the step of, in response to verifying the indicia, delivering the package to the intended recipient in accordance with delivery information on the label.

148. The method of claim 146, wherein the machine readable indicia are optically scanned.

149. The method of claim 146, wherein the step of verifying is carried out at the point of acquisition of the package.

150. The method of claim 146, wherein the verifying device is a DIAD, and wherein the step of verifying is carried out at the point of acquisition of the package by display of information on the DIAD.

1. The method of claim 146, further comprising the steps of receiving an order from a customer of the shipping service provider via an **Internet** accessible computer system; validating information received in the order; in response to validatine, information received in the order, communicating the printer indicia to the **Internet** Ln accessible computer system.

152. A method for shipping a package from a package sender to an intended recipient via a shipping service provider, wherein the shipping of the package is conducted according to profile information of a customer of the shipping service provider, comprising the steps of:
storing profile information associated with the customer in a computer system associated with the shipping service provider; providing an **Internet** -accessible order-receiving system associated with the shipping service provider; at the order-receiving system, receiving an order for shipping a package and identifying information from the customer via a computer system associated with the customer; using the customer identifying information to retrieve profile information associated with the customer from the shipping service provider computer system; determining a manner for handling the package to be shipped in accordance with the retrieved profile information; transmitting information indicating the deter-mined manner for handling the package to the customer's computer system for printing of a shipping label; acquiring the package by the shipping service tn provider; and handling the package in accordance C) information printed on the shipping label, whereby the shipping of the package is c according to stored profile information associated customer.

153. The method of claim 152, wherein the profile. information includes payment information, and further comprising the step of charging a customer for shipping the I= package in accordance with the stored payment information.

154. The method of claim 152, further comprising the step of billing the customer for shipping the package in accordance to payment information in the stored profile information.

155. The method of claim 152, further comprising the step of editing the stored profile information.

156. The method of claim 155, wherein the step of editing the stored profile information comprises the.steps of:

retrieving the stored profile information in accordance with a command received from the customer's computer system; changing the stored profile information in accordance with a command received from the customer's computer system.

157. The method of claim 152, wherein the step of storing profile information comprises:

displaying an **Internet** -based data entry form on the customer's computer system for entry of the profile information associated with the customer; receiving entry into the data entry form by the customer of information relating to - shipment handling and payment as profile information; communicating the profile information to the computer system of the shipping service provider; and storing the profile information at the computer system of the shipping service provider.

158. The method of claim 152, further comprising the steps of:

associating a unique customer identifier with the profile information; in response to entry of the unique customer identifier by the customer when entering an order to ship a package, retrieving the profile information corresponding to the particular customer associated with the unique customer identifier.

159. The method of claim 152, wherein the stored profile inforination comprises:

a return address for the package to be
returned to; and
a level of service designation determining how quickly the package is to be delivered.

160. The method of claim 152, wherein the profile information includes payment information designating the 1 manner in which the shipping service provider will be paid for the service of shipping the package, and a rate associated with L shipping the package corresponding to a particular customer.

161. The method of claim 152, wherein the order for shipping the package is entered via an **Internet** browser window including shipping inforination data fields for receiving shipping information, and further comprising the step of prepopulating the data fields with retrieved profile information.

162. The method of claim 152, wherein the label is printed at a computer system associated with the customer using the transmitted information.

163. A method for shipping a package from a package sender to an intended recipient via a shipping service provider, the package sender having an **Internet** -accessible computer system, comprising the steps of providing an Interriet-accessible shipping computer system (ISS) associated with the shipping service provider, the ISS operative for receiving shipping information from a package sender via the package sender's computer system; displaying a data entry form on the package sender's computer system for entry of shipping information by the package sender; receiving shipping information entered by the package sender; transmitting the shipping inforination from the package sender's computer system to the ISS via the **Internet** ; validating predetermined shipping information; IM 4n in response to validating the predetermined shipping information, communicating predetermined shipping label information for display on the package sender's computer system and printing of a customized shipping label; and acquiring the package and associated customized shipping label for introduction into the shipping service provider's package handling system, whereby the shipping service provider accepts and handles the package with the customized shipping label associated therewith in the same manner as a package having a preprinted shipping label.

164. The method of claim 163, wherein the shipping information includes information selected from the group comprising: information relating to characteristics of with the package, information corresponding to the package sender, information relating to the intended recipient, information relating to payment for the shipping service, and information relating to a service type.

165. The method of claim 163, further comprising the step of receiving identifying information from the package sender for verifying that the package sender is authorized to It:, order service from the shipping service provider.

166. The method of claim 165, further comprising the step of prepopulating selected data fields of the data entry form with information retrieved from the shipping computer ZD system in response to the identifying information.

167. The method of claim 163, further comprising the steps of:

storing predetermined address information corresponding to one or more intended recipients in one or more entries in an address book stored on the package sender's computer system; and populating selected data fields of the data entry form with information derived from the package sender's address book in response to selection of a particular entry in the address book.

168. The method of claim 163, wherein the step of validating predetermined shipping information comprises 2:I validating address information of the intended recipient, and wherein a postal code is employed for the address validation.

169. The method of claim 163, further comprising the step of determining a selected mode of entry of the package into the shipping service provider's package handling system.

170. The method of claim 169, wherein the step of determining the selected mode of entry of the package into the shipping service provider's package handling system comprises customer selection of package dropoff at a dropoff location.

171. The method of claim 169, wherein the step of determining the selected mode of entry of the package into the shipping service provider's package handling system comprises customer selection of on demand pickup.

172. The method of claim 17 1, further comprising the step of automatically dispatching a package pickup to the package sender to pick up the package in response to a determination that on demand pickup of the package has been requested by the package sender.

173. The method of claim 163, further comprising the step of receiving selection of a payment method for shipping the package.

174. The method of claim 173, wherein the payment method comprises use of a predetermined account associated with the package sender.

175. The method of claim 173, wherein the payment method comprises payment with a credit card.

176. A label for use with a package for handling by an automated package delivery system operated by a shipping service provider, the label being printable by commonly available printers associated with a personal computer system, comprising a return address region for containing information corresponding to a return address of a package sender; a ship to address region for containing information corresponding to a destination address of an intended recipient for the package; a machine readable postal code region for containing the postal code of the destination address of the intended recipient for reading by optical scanning, equipment operated the shipping service provider; a machine readable tracking number region for containing a tracking number associated with the package in a machine readable format for reading by optical scanning equipment operated by the shipping service provider; and authenticity indicia for enabling personnel of the shipping service provider to recognize that the label is authentic, the authenticity indicia comprising:

a billing prepaid indicator region for
containing information indicating that the shipment service provided by
the shipping service provider has been prepaid; and a predetermined
identifying, re containing identifying indicia associated with the shippi
provider.

177. The label of claim 176, further comprising a third machine readable
encoded region for containing text of the label and other package
information in a form readable by an optical scanning device operated by
a person associated with the shipping service provider.

178. The label of claim 176, further comprising a human readable sort
code region for containing information relating to identification of a
hub and sortation belt of automated packaged handling equipment
associated with the shipping service provider.

179. The label of claim 176, further comprising a level of service
indicating region for containing information corresponding to a selected
level of service provided by the shipping service provider for the
package.

180. The label of claim 176, further comprising a number of packages
region for containing information C> corresponding to the number of
packages contained in a shipment of a plurality of packages.
181. The label of claim 176, wherein the tracking number includes an
indicium identifying the number as a tracking number, a customer account
number, a level of service indicator corresponding to the level of
service indicated in the level of service indicating region, and a
predeten-nined reference number determined by the shipping service
provider.

182. The label of claim 176, wherein the customer account number includes
payment indicia corresponding to a type of payment by a customer of the
shipping service provider for shipment of the package.

183. The label of claim 182, wherein th
indicia corresponds to a pre-established account of the with the shipping
service provider.

184. The label of claim 182, wherein
indicia corresponds to a credit card payment.

185. The label of claim 176, wherein the label further includes a
customer information region for containing information provided by the
package sender.
186. The label of claim 176, wherein the label is printed using a print
function associated with an **Internet** browser computer program on a
personal computer operated by a customer of the shipping service
provider.

187. The label of claim 186, wherein selected regions of the label
include information displayed in an **Internet** browser computer program
window opened when the package sender accesses an **Internet** -accessible
computer shipping system operated by the shipping service provider.

188. The label of claim 186, wherein the browser computer window
automatically formats a printer for landscape orientation for the label,
which is folded in half to form a complete label, whereby the label is
receivable in a standard plastic window for an adhesive plastic label
provided by the shipping service provider.

189. The label of claim 186, wherein a computer system associated with
the shipping service provider queries the customer's **Internet**
accessible computer to determine a browser type and provides an
appropriate page setup command to cause proper printing of the label for

a determined type of browser.

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7/9/1   (Item 1 from file: 810)
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ABL TRANS DIAL: Dial and ABL-Trans Break New Ground in Managing
Transportation/Distribution Costs

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LAFAYETTE, Calif.--(BUSINESS WIRE)--Aug. 21, 1997--Virtually
every global manufacturer and retailer in the world is looking at
ways to control costs, and closely scrutinizing **freight** distribution
costs can be a good place to start, says Bob Cross, president of
ABL-Trans.
A California-based intermodal **marketing** company (IMC) that
arranges rail and truck transportation in North America for Fortune
500 and other corporations, ABL-Trans has begun working with select
customers to help them "trim the fat" out of intermodal **shipping**
costs. The Dial Corporation of Scottsdale, Arizona, which uses IMCs
to route shipments of consumer packaged goods, has found that a
unique ABL-Trans analytical service is helping it eliminate
unexpected, recurring costs known as **accessorial** charges."
Dial manufactures and markets Dial soaps, Purex detergents,
Renuzit air fresheners and Armour Star canned meats.
In Dial's case, the company has been able to shave thousands of
dollars per quarter off the cost of product distributions. There
are many examples, with savings varying by consignee and volumes.
"Several years ago," says Mark Russell, Dial's manager of
transportation, "add-ons to our **freight** transportation bills became
more and more of a problem -- often coming weeks or months after the
transportation invoice itself. If you cannot track these
accessorial or supplemental charges, it makes it extremely difficult
to calculate the total cost to any specific customer or warehouse.
"Now, we are finally getting a handle on these non-value-added
activities and charges," Russell says.
Accessorials Defined
Accessorial charges, which are incurred by many shippers or
consignees, are assessments that are incremental to the actual
hauling of **freight** by railroads and trucking firms.
Examples: A driver has to wait at the shipper's dock because
the **freight** is not ready for loading to the container at the
appointed time, or blocking and bracing are inadequate. The
consignee asks the driver to assist in unloading at destination.
Shippers ask for "split pick-ups" from multiple locations. The
railroad tacks on extra charges for equipment storage or detention.
Analytical Reporting is the Key
But Jerel McQuarrie, vice president of sales for ABL-Trans, says
customers can substantially reduce the **accessorial** charges once they
identify the specific locations and reasons these charges are being
incurred. "It's a question of identifying patterns, so the shipper
can begin to address the infractions most often being repeated --
whether at pick-up, delivery or along the way. The key," says
McQuarrie, "is accurate, analytical reporting by the service
provider."
Dial's Russell says the quarterly analysis of accessorials he
gets from ABL-Trans is the kind of logistics support that adds
higher value to the services of an intermodal **marketing** company.
"By helping us identify and proactively eliminate the recurring
accessorials," he says, "ABL-Trans is helping us manage and control

our total distribution costs."

Examples of Savings

In once case, heavy charges were accruing for deliveries to a large consignee in the South. ABL-Trans was able to contract the local truck deliveries to three firms instead of one, compare their performance, and allocate all future deliveries to the most efficient. Dial's accessorials charges for deliveries to that consignee were reduced by 84 percent.

Even in instances where Dial has observed increases in accessorials, it is now able to track them accurately and efficiently recoup the charges, Russell says. Moreover, ABL-Trans has nearly eliminated the need for Dial to process "supplemental bills," because the IMC has required draymen to submit any **accessorial** charges within 48 hours of the delivery.

As a result of these improvements, Dial is saving thousands of dollars on formerly unmanageable accessorials. "The biggest impact is that, if we were not on top of these charges, they would escalate further," says Russell. "Not only is this effort helping our bottom line and our competitiveness, but it also ensures the competitiveness of the intermodal transportation option."

ABL-Trans was acquired in April from the Union Pacific Railroad Company by a group of transportation veterans headed by Donald C. Orris. Orris was former president of the Southern Pacific Railroad until SP's acquisition last September by UP.

The ABL-Trans group arranges intermodal **freight** movements throughout North America for manufacturers and retailers and provides customized electronic tracking, **accessorial** and other logistical reports. Other services include specialized trucking and international transportation consulting. The group contracts with all major railroads and hundreds of owner-operators. Annual revenues were $83.0 million in 1996 and are projected to reach $100 million this year.

Keywords: Distribution costs, transportation, logistics, rail

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